



## Final

# Finding of Suitability to Transfer for Parcels UC-1 and UC-2

# Hunters Point Naval Shipyard San Francisco, California

# January 2015

#### Prepared for:

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#### ACRONYMS AND ABBREVIATIONS

§ Section§§ Sections

μg/L Microgram per liter

ACM Asbestos-containing material

ARIC Area requiring institutional controls

BCT BRAC Cleanup Team

BEC BRAC Environmental Coordinator
BRAC Base Realignment and Closure

BRRM Base Redevelopment and Realignment Manual BTEX Benzene, toluene, ethylbenzene, and xylenes

CFR Code of Federal Regulations

CERCLA Comprehensive Environmental Response, Compensation, and Liability Act

CRUP Covenant to restrict use of property

DERP Defense Environmental Restoration Program

DoD Department of Defense

DTSC Department of Toxic Substances Control

EBS Environmental baseline survey

EPA U.S. Environmental Protection Agency

ERRG Engineering/Remediation Resources Group, Inc.

FAD Friable, accessible, and damaged

FFA Hunters Point Federal Facility Agreement

FIFRA Federal Insecticide, Fungicide, and Rodenticide Act

FOST Finding of Suitability to Transfer

HLA Harding Lawson Associates HPNS Hunters Point Naval Shipyard

HRA Historical Radiological Assessment

IC Institutional control
IR Installation Restoration

LBP Lead-based paint

LLRW Low-level radioactive waste

NAVSEA Naval Sea Systems Command

Navy Department of the Navy

NCP National Oil and Hazardous Substances Pollution Contingency Plan

#### **ACRONYMS AND ABBREVIATIONS (CONTINUED)**

NEESA Naval Energy and Environmental Support Activity

NPL National Priorities List

O&M Operation and maintenance

PAH Polycyclic aromatic hydrocarbon

PCB Polychlorinated biphenyl PMO Program Management Office

ppm Part per million

PRC PRC Environmental Management, Inc.

RACR Remedial action completion report

RCRA Resource Conservation and Recovery Act

RD Remedial design ROD Record of decision

Sealaska Environmental Services, Inc.

SI Site inspection

TCRA Time-critical removal action
TPH Total petroleum hydrocarbons

UC Utility corridor
U.S.C. United States Code

VOC Volatile organic compound

Water Board California Regional Water Quality Control Board, San Francisco Bay Region

#### 1.0 PURPOSE

The purpose of this finding of suitability to transfer (FOST) is to summarize how the requirements and notifications for hazardous substances, petroleum products, and other regulated materials for two utility corridor (UC) parcels known as UC-1 and UC-2 at Hunters Point Naval Shipyard (HPNS) (Figure 1) have been satisfied. Figure 2 shows the locations of Parcels UC-1 and UC-2 (termed the "Property").

This FOST has been prepared in compliance with the Department of Defense (DoD) Base Redevelopment and Realignment Manual (BRRM) (DoD 2006) and the Navy Base Realignment and Closure (BRAC) Program Management Office (PMO) Policy for Processing Findings of Suitability to Transfer or Lease (Navy BRAC PMO 2008).

#### 2.0 PROPERTY DESCRIPTION

HPNS is located in southeastern San Francisco on a peninsula that extends east into San Francisco Bay, California (Figure 1). A portion of HPNS has been conveyed out of federal ownership (former Parcel A). The remaining real property is currently divided into a total of 11 parcels, three of which are described as "utility corridors." Parcels UC-1 and UC-2 are the subject of this FOST (Figure 2). Historically, most of the area associated with the Property has been a paved roadway or parking area at HPNS. Parcel UC-1 is about 3.5 acres and Parcel UC-2 is about 3.8 acres.

Parcel UC-1 includes a portion of Spear Avenue and is bounded on the north by Parcels D-2 and former Parcel A, on the east by Parcel UC-2, on the south by Parcels E and G, and on the west by Parcel UC-3. Parcel UC-1 is nearly completely paved and includes Buildings 819 and 823, associated asphalt parking areas, and a small hillside area (Figure 3). Building 819 is a 1,265-square-foot, one-story concrete-reinforced structure built in 1957 and known as Sewage Pump Station A (Tetra Tech EM Inc. 1998). Building 823 is 400-square-foot building that adjoins Building 819 and was used as a pump station as well as a stand-by generator building (Figure 3).

Parcel UC-2 includes portions of Fisher Avenue and Robinson Street and is bounded on the north by Parcels B and C, on the east by Parcel C, on the south by Parcels C and G, and on the west by Parcel UC-1 and former Parcel A (Figure 4). Historical use of the southern portion of Parcel UC-2 is as a roadway (Fisher Avenue), and the northern portion is as a triangularly shaped parking lot (at the corner of Fisher Avenue and Robinson Street) for Building 101. There are no buildings on Parcel UC-2 except for a small, unused security guard station located in Robinson Street. Parcel UC-2 is mostly paved, except for the steep hillside bordering Fisher Avenue, which is covered by vegetation.

#### 3.0 SUMMARY OF ENVIRONMENTAL CONDITIONS

HPNS was listed on the U.S. Environmental Protection Agency (EPA) National Priorities List (NPL) under the Comprehensive Environmental Response, Compensation, and Liability Act

(CERCLA) in 1989. The Defense Environmental Restoration Program (DERP), codified as 10 *United States Code* (U.S.C.) Sections (§§) 2701–2709, gave the DoD Environmental Restoration Program a statutory basis. The Navy implements the DERP subject to, and in a manner consistent with, CERCLA and its regulations (the National Oil and Hazardous Substances Pollution Contingency Plan [NCP] at Title 40 of the *Code of Federal Regulations* [CFR] Part 300). In September 1990, EPA Region 9, the California Environmental Protection Agency Department of Toxic Substances Control [DTSC]), the California Regional Water Quality Control Board, San Francisco Bay Region (Water Board), and the Navy signed a Federal Facility Agreement (FFA) (Navy 1990). EPA, DTSC, and the Water Board were notified of the initiation of this FOST. Regulatory agency comments to this FOST are provided in Appendix B. The Navy, EPA, DTSC, and the Water Board representatives are collectively referred to as the BRAC Cleanup Team (BCT) for HPNS.

This section summarizes how the applicable environmental requirements for CERCLA, including radiological and other regulated hazardous materials, have been fully addressed at the Property (presented in Table 1).

Pursuant to CERCLA and Title 40 CFR Part 373, the deed for each parcel will contain, to the extent such information is available on the basis of a complete search of agency files, a notification of hazardous substances stored for 1 year or more or known to have been released or disposed of within the parcel. The information required to support this notification is provided in Appendix A. The notification will consist of the type and quantity of such hazardous substances; the time at which such storage, release, or disposal took place; and a description of the remedial or response action taken, if any.

# 3.1 COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT

Portions of Installation Restoration (IR) Program sites IR Site 50 (storm drain and sanitary sewer lines) and site inspection (SI) site SI-45 (steam lines) are within both Parcels UC-1 and UC-2. In addition, IR Site 6 is partially located within Parcel UC-2 and a portion of IR Site 51 (former transformer locations) is within Parcel UC-1 as shown in Figure 4. Under the IR Program, and in accordance with CERCLA, a basewide preliminary assessment and SI was performed in 1991 to identify other areas of concern that had not been previously identified or addressed (PRC Environmental Management, Inc. [PRC] and Harding Lawson Associates [HLA] 1994).

The basewide environmental baseline survey (EBS) report (Tetra Tech EM Inc. 1998) documents no potential adverse environmental activity or observed impacts to the area of the subparcels that are within the Property, except for IR Site 6. The basewide issues applicable to these parcels identified in the EBS include SI-45, the former steam lines located throughout HPNS; IR Site 50, the HPNS combined storm drain and sanitary sewer systems; and IR Site 51, former transformer locations, including a pole-mounted transformer at Parcel UC-1.

The steam lines (SI-45) were investigated as part of the SI to evaluate whether the system contained waste oil. The steam lines at the Property did not contain waste oil, and no further investigation was required (PRC and HLA 1993).

The combined storm drain and sanitary sewer systems (IR Site 50) are described in more detail below (Section 3.1.2) as part of the discussion of radiological concerns.

The pole-mounted transformer (Substation I-4) at Building 819 (IR Site 51) is no longer present on Parcel UC-1. The electrical equipment that potentially contained polychlorinated biphenyls (PCB) is further discussed below (Section 3.7).

No soil samples have been collected at the Property for chemical analysis, except for samples collected associated with the radiological removals. A total of 2,631 soil samples were collected to support the radiological removals. Approximately 876 cubic yards of soil did not meet radiological release criteria and was disposed of off site as low-level radioactive waste (LLRW) (Tetra Tech EC, Inc. 2011). Samples were not collected for other chemical constituents because, based on review of historical documents and past operations, no known sources of chemical contamination are present. As a result, soil conditions at the Property can be represented by Hunters Point ambient levels in areas where soil investigation is not required. According to the records of decision (ROD) for the Property, the selected soil remedies are durable covers and institutional controls (IC), and the selected remedy for groundwater (Parcel UC-2 only) is monitored natural attenuation and ICs (Navy 2009b, 2009c). The designs for durable covers and groundwater monitoring were presented in the remedial design (RD) package for the Property (ChaduxTt 2010). The ICs are discussed in more detail in Section 6.0.

The remedial action for soil (durable covers) at the Property was implemented between May and September 2012. Approximately 8,371 tons of nonhazardous waste, including 8,147 tons of soil and 224 tons of vegetation, was removed and disposed of off site during construction of the covers. The final remedial action completion report (RACR) was submitted in February 2013 (Engineering/Remediation Resources Group, Inc. [ERRG] 2013a) and an addendum summarizing a soil gas survey conducted at Parcel UC-1 (discussed below) was submitted in September 2014 (ERRG 2014b). EPA, DTSC, and the Water Board have concurred with the final RACR (EPA 2013; DTSC 2013; Water Board 2013) and the addendum (EPA 2014). Long-term operation and maintenance (O&M) requirements for the durable covers at Parcels UC-1 and UC-2 are detailed in the final O&M plan (ERRG 2013b). Groundwater monitoring to confirm natural attenuation continues at Parcel UC-2. ICs in the form of deed restrictions and a Covenant to Restrict the Use of Property (CRUP) will become effective when the Property is transferred by quitclaim deed to prevent or minimize exposure to areas where potential unacceptable risk is posed by chemicals of concern in soil and groundwater. A soil gas survey was completed at Parcel UC-2 in 2010 (Sealaska Environmental Services [Sealaska] 2013). An additional soil gas survey was completed at Parcel UC-1 in 2013 (ERRG 2014a). Results from these surveys have been used to revise the extent of areas requiring institutional controls (ARIC) for volatile organic compound (VOC) vapors through review and approval by the FFA signatories of a memorandum from the Navy BRAC Environmental Coordinator (BEC) to the administrative record file addressing the revised VOC ARIC boundary as a non-significant change to the remedy selected in the RODs (see 55 Federal Register 8772, March 8, 1990) (Navy 2014). Figure 5 shows the ARICs for VOC vapors as currently envisioned based on the results of the soil gas surveys. There are currently no buildings or enclosed structures within the VOC ARICs associated with the Property.

#### 3.1.1 IR Site 6

A portion of IR Site 6 is located on the north end of Parcel UC-2 (Figure 4). A small groundwater plume containing carbon tetrachloride and chloroform exists at Parcel UC-2 (wells IR06MW54F and IR06MW55F) and does not have an identified source. Except for this small plume, Parcel UC-2 is upgradient of other areas of groundwater contamination at HPNS. The ROD for Parcel UC-2 selected monitored natural attenuation as the remedy for the low concentrations of VOCs in groundwater. Groundwater samples collected from Parcel UC-2 contained VOCs at concentrations less than 10 micrograms per liter (µg/L). These levels exceeded the vapor intrusion remediation goals for groundwater based on potential exposure via indoor air. However, results from soil gas samples collected above the plume in 2010 did not indicate concentrations that would pose an unacceptable risk to potential future residential receptors via vapor intrusion. Results from this survey have been used to revise the extent of the ARICs for VOC vapors through review and approval by the FFA signatories of a memorandum from the Navy BEC to the administrative record file addressing the revised VOC ARIC boundary as a non-significant change to the remedy selected in the ROD (Navy 2014). Figure 5 shows the ARICs for VOC vapors as currently envisioned based on the results of the soil gas survey.

#### 3.1.2 Radiological Concerns

In the Historical Radiological Assessment (HRA) (Naval Sea Systems Command [NAVSEA] 2004), the Navy identified potentially radiologically impacted sites throughout HPNS (including buildings, equipment, and infrastructure), including within the Property, associated with former use of general radioactive materials and decontamination of ships used during atomic weapons testing in the South Pacific. The HRA identified Building 819 as being radiologically impacted. Impacted areas are generally those with a history of radiological operations and, therefore, having the potential for residual radioactive contamination (NAVSEA 2004). Building 819 was subsequently surveyed and determined to present no unacceptable radiological risks. On April 14, 2008, DTSC issued a letter concurring that Building 819 was suitable for unrestricted use with respect to radiological issues (DTSC 2008).

The combined storm drain and sanitary sewer lines (IR Site 50) were investigated for the presence of radiological risks. The storm drain lines were used to transfer storm water runoff to the bay; the system was originally designed and built in the 1940s as a combined sanitary and storm sewer system, using the same conveyance piping and 40 separate discharge outfalls into the bay. In 2006, based on the HPNS radiological operational history, the Navy concluded that a response action was required for the radiologically impacted media in and around the storm drain and sanitary sewer lines. The Navy further concluded that the only acceptable alternative to address potential radioactive contamination was to excavate, survey, and appropriately dispose of the radiologically impacted materials (Navy 2006).

The Navy has completed a time-critical removal action (TCRA) for storm drains and sanitary sewers for the portions of those utility systems within the Property. The TCRA involved excavating radiologically impacted storm drain and sanitary sewer lines and surrounding soil to achieve the removal action cleanup objectives. The TCRA met the remedial action objectives in

the RODs for the Property as documented in the removal action completion report for the Property (Tetra Tech EC, Inc. 2011). Based on the removal action completion report, DTSC has concurred that the Property is suitable for unrestricted use with respect to radiological issues (DTSC 2011).

#### 3.2 Presence of Petroleum Products and Derivatives

No petroleum lines run through the Property and petroleum products were not chemicals of concern at Parcels UC-1 and UC-2. Consequently, groundwater samples collected at Parcel UC-2 were not routinely analyzed for total petroleum hydrocarbons (TPH). However, groundwater samples collected at Parcel UC-2 to monitor for chlorinated VOCs were also analyzed for petroleum-related VOCs benzene, toluene, ethylbenzene, and xylenes (BTEX). No detections of BTEX were observed in 12 rounds of samples collected from two wells between December 2005 and April 2010. Minor detections (maximum 650  $\mu$ g/L TPH extractable as motor oil) were observed in samples collected in 1994 and 1995, but these detections are much less than the risk-based action level for total TPH of 20,000  $\mu$ g/L. The BCT approved cessation of analysis for BTEX in groundwater samples collected at Parcel UC-2 in 2010 (CE2-Kleinfelder 2011a, 2011b).

Pipes coated with a material containing polycyclic aromatic hydrocarbons (PAH) may be present below ground surface at various locations at the Property. PAHs are regulated substances and must be handled in accordance with all applicable federal, state, and local laws and regulations. The Navy, in consultation with EPA, DTSC, and the Water Board, has determined that the pipes and associated coating material in their existing subsurface condition do not present any threat to human health or the environment, and will not present any threat to human health or the environment if and when removed and handled in accordance with applicable laws.

#### 3.3 ABOVEGROUND AND UNDERGROUND STORAGE TANKS

There is no record of aboveground or underground storage tanks on the Property.

#### 3.4 MUNITIONS AND EXPLOSIVES OF CONCERN

At HPNS, high explosive items in ship's allowances were loaded and discharged only at designated naval ordnance facilities or explosive anchorages. Ships scheduled to undergo repair or overhaul were all relieved of their ammunition and explosives, except for permissible small arms ammunition, before they entered into the waters near the shipyard (Naval Energy and Environmental Support Activity [NEESA] 1984).

There is no record of munitions or explosives of concern on the Property.

#### 3.5 ASBESTOS-CONTAINING MATERIAL

In 1993, the Navy conducted a survey for the presence of asbestos-containing material (ACM) at each building within the former boundary of Parcel A. Buildings 819 and 823 were located in

Parcel A at that time. The survey reported Building 819 contained damaged nonfriable ACM (Tetra Tech Inc. 1993).

Nonfriable ACM was identified in Building 823 during the EBS surveys (Tetra Tech EM Inc. 1998). The basewide EBS did not identify a change in ACM conditions in Building 819 as reported in the 1993 survey. It is assumed that Building 819 also contains nonfriable ACM.

It is DoD policy to manage ACM in a manner protective of human health and the environment, and to comply with all applicable federal, state, and local laws and regulations governing ACM hazards in or on buildings, structures, facilities, and utilities on the Property (DoD 1994). The Navy is not aware of any ACM that has been released into the environment and poses a threat to human health in the Property. Remediation of ACM by the Navy is not required in or on buildings, structures, facilities, and utilities that may be scheduled for demolition by the Transferee where (1) the transfer document prohibits occupation of the buildings until the ACM is abated or the building is demolished; and (2) the Transferee assumes responsibility for management of any ACM in accordance with applicable laws.

#### 3.6 LEAD-BASED PAINT

Before 1978, the use of lead-based paint (LBP) was common throughout the United States, including at military installations. DoD's policy is to survey LBP hazards primarily applied to residential structures built before 1978 (DoD 1994). Navy policy does not require LBP surveys for commercial or industrial buildings unless the buildings will be reused for residential purposes.

During the EBS surveys, Buildings 819 and 823 were not surveyed for LBP, as they were not residential structures; however, they are assumed to contain LBP based on the date of construction. Building 819 was constructed in 1957 (Navy 1998). The date of construction for Building 823 is unknown, so it is assumed to contain LBP as well. The Navy is not aware of any LBP that has been released into the environment and poses a threat to human health on the Property. In addition, land use restrictions that will be carried forward for the entire area of the Property will ensure that any potential LBP in soil that may exist in the vicinity of the structures will remain beneath the durable cover and will not pose a human health threat.

The federal Residential Lead-Based Paint Hazard Reduction Act of 1992 applies only to the transfer of federal property for residential use. The Navy has not implemented an LBP abatement program because the proposed transfer of the Property will not involve use of any existing structures for residential purposes. In the event Buildings 819 and 823 will be reused as residential property, the Transferee will be required to renovate them consistent with the regulatory requirements for abatement of LBP hazards. If buildings, structures, or facilities that contain, or are presumed to contain, LBP are to be demolished, they must be demolished in accordance with applicable local, state, and federal requirements.

Demolition of non-residential buildings and structures constructed prior to 1978 creates the possibility of lead being found in the soil as a result of such activities. With respect to any such nonresidential buildings and structures which the Transferee intends to demolish and redevelop for residential use after transfer, the Transferee may, under applicable law or regulation, be

required by DTSC or other regulatory agencies to evaluate the soil adjacent to such non-residential buildings and structures for soil-lead hazards, and to abate any such hazards that may be present after demolition of such non-residential buildings and structures, and prior to occupancy of any newly constructed residential buildings.

#### 3.7 POLYCHLORINATED BIPHENYLS

Based on the results of the basewide PCB programs conducted at HPNS, no transformers with PCB concentrations of 5 parts per million (ppm) or more exist on the Property. The concentration of 5 ppm was used as a benchmark in the EBS report to represent a threshold for disposal of transformer fluids based on California regulations. The 5 ppm concentration applies only to liquids within a transformer or electrical equipment.

A basewide SI of former transformer locations was conducted in 1994 (HLA 1994). Since the SI was completed, the Navy has removed all transformers and oil circuit breakers associated with IR Site 51 that contained PCBs at concentrations of 5 ppm or more. The only transformer at the Property was a pole-mounted transformer designated Substation I-4. The pole-mounted transformer (Substation I-4) at Building 819 was removed from the property and disposed of off site (Public Works Center San Francisco Bay 1996). The evaluation of the area around the transformer did not indicate the need for any further investigation (PRC, Levine-Fricke-Recon, and Uribe and Associates 1996).

#### 3.8 PESTICIDES

There is no record that an area or building on the Property was dedicated to storage of pesticides. The Property may contain pesticide residue from pesticides that have been applied in the management of the Property (see Section 5.4).

#### 4.0 ADJACENT PARCELS

The Property is upgradient from most of the adjacent environmental sites, except for IR Site 6, at HPNS (ChaduxTt 2010). Groundwater generally flows southeast at Parcel UC-1 and to the east at Parcel UC-2 following the local topographic gradient toward San Francisco Bay. Groundwater flows onto the Property from uncontaminated areas. Soil gas has the potential to migrate from adjacent parcels onto the Property.

There is little potential for radioactive materials in adjacent parcels to pose a risk at the Property. The only potential exposure pathway for radiological exposure would be via inhalation of windblown dust from uncovered areas. The Navy maintains active dust control measures for all radiologically impacted areas at HPNS, including those adjacent to the Property (TetraTech EC, Inc. 2009). The basewide radiological contractor periodically measures the dose rate at the perimeter of all radiologically impacted areas, and these measurements indicate no migration of radiological materials. Likewise, basewide monitoring for dust does not indicate radioactive contamination in the dust.

#### 4.1 GROUNDWATER

The following subsections describe adjacent IR sites and the potential for groundwater from those sites to affect the Property.

#### Parcel B

IR Site 42 is located north and downgradient of Parcel UC-2 (Figure 4). This site is within Parcel B, where a ROD was signed in 1997 (Navy 1997) and an amended ROD was signed in 2009 (ChaduxTt 2009). It is unlikely that any hazardous substances from Parcel B would affect the Property based on the upgradient location of the Property relative to Parcel B.

#### Parcel C

IR Sites 30, 57, 58, and 63 are located east and downgradient of the Property (Figure 4). These sites are within Parcel C, where a ROD was signed in 2010 (Navy 2010b). It is unlikely that hazardous substances from Parcel C would affect the Property based on the upgradient location of the Property relative to Parcel C.

IR Site 6 is north of and continues into the Property (Figure 4). As discussed in Section 3.1.1, results from soil gas samples collected in 2010 above the plume in this area did not indicate concentrations that would pose an unacceptable risk to potential future residential receptors via vapor intrusion. Figure 5 shows the ARIC for VOC vapors as currently envisioned based on the 2010 soil gas survey.

#### Parcel D-2

Parcel D-2 is located north and upgradient of the Property (Figure 3). A no further action ROD was signed for Parcel D-2 in 2010 (Navy 2010a); therefore, it is unlikely that any hazardous substances from Parcel D-2 could affect the Property.

#### Parcels E and UC-3

IR Sites 4 and 36 are located in Parcels E and UC-3 (Figure 3). They are adjacent to and immediately downgradient of the Property. As previously discussed, groundwater flows downgradient from the Property to IR Sites 4 and 36, so it is unlikely that hazardous substances from Parcels E and UC-3 could affect the Property. Groundwater from IR Sites 4 and 36 flows southwest away from the Property.

#### Parcel G

IR Sites 9, 33, and 37 are located in Parcel G south and immediately downgradient of the Property (see Figure 3). These sites were investigated as source areas for impacts to groundwater. Constituents of concern in the groundwater include tetrachloroethene,

trichloroethene, chloroform, chromium VI, and nickel. The Property is not expected to be affected by migration of hazardous substances from these IR sites based on the upgradient location of the Property; however, the plume is being monitored to ensure that groundwater flow patterns remain consistent (ChaduxTt 2010). Furthermore, treatment of groundwater at adjacent Parcel G using zero-valent iron during a treatability study greatly reduced concentrations of VOCs in groundwater at Parcel G. The treatability study to address the chemicals in groundwater has been completed, with remediation goals achieved in most areas. The treatability study confirmed that Parcel UC-1 has not been affected by hazardous substances from Parcel G (Alliance Compliance Group Joint Venture 2010). Groundwater monitoring will continue at IR Sites 9, 33, and 37 in accordance with the ROD for Parcel G (Navy 2009a; ChaduxTt 2010).

#### 4.2 SOIL GAS

Soil gas has the potential to migrate from adjacent parcels onto the Property. The following subsections describe adjacent parcels and the potential for soil gas from those sites to affect the Property.

#### Parcel B

Results from soil gas samples collected in 2010 from portions of the southeastern part of Parcel B (Sealaska 2010) indicated concentrations that could pose an unacceptable risk to potential future residential receptors via vapor intrusion. However, these areas are more than 300 feet from the Property and are separated from the Property by active soil, groundwater, and soil gas remediation at Parcel C in the areas in and around Building 134. Remediation activities include excavation and offsite disposal, soil vapor extraction, and in situ groundwater treatment using injection of zero-valent iron and biological amendments. Therefore, it is unlikely that soil gas migration from Parcel B would affect the Property.

#### Parcel C

Areas of known VOC contamination in soil and groundwater are undergoing active remediation and these activities are expected to address any potential migration of VOCs in soil gas from Parcel C.

#### Parcel D-2

A no further action ROD was signed for Parcel D-2 in 2010 (Navy 2010a); therefore, it is unlikely that any hazardous substances from Parcel D-2 could affect the Property.

#### Parcels E and UC-3

The nearest area of VOC contamination at Parcels E and UC-3 is the groundwater plume associated with IR Site 4 at Parcel E. This plume is more than 400 feet from the western end of the Property, and it is unlikely that soil gas related to this plume would affect the Property.

#### Parcel G

Results from soil gas samples collected in 2010 from a portion of the northeastern corner of Parcel G adjacent to the Property indicated concentrations that could pose an unacceptable risk to potential future residential receptors via vapor intrusion. Benzene contributed the most risk. However, concentrations posed risk only slightly above the unacceptable level (risks ranged from 1.6 x 10<sup>-6</sup> to 2.1 x 10<sup>-6</sup>) and the associated sample locations were more than 50 feet from the Property boundary. Benzene readily biodegrades in the aerobic conditions in the unsaturated zone (Abreu and Schuver 2012; EPA 2011; Hers and Truesdale 2013). Therefore, it is unlikely that soil gas migration from Parcel G would affect the Property. Furthermore, the portion of Parcel UC-1 adjacent to the observed benzene concentrations is part of the ARIC for VOC vapors at the Property.

#### 5.0 NOTIFICATIONS

This section summarizes the notifications applicable to the Property that were identified for incorporation into the transfer deed.

#### 5.1 HAZARDOUS SUBSTANCES

Hazardous substances stored, released, or disposed of on site require a CERCLA hazardous substance notice, in accordance with Title 40 CFR Part 373. Appendix A lists the hazardous substances stored, released, or disposed of at the Property that require notification under CERCLA § 120(h).

#### 5.2 ASBESTOS-CONTAINING MATERIAL

The deed will contain a notice that the Transferee is hereby informed and does acknowledge asbestos and ACM have been found and are otherwise presumed to exist in Buildings 819 and 823 in Parcel UC-1. The Transferee will be responsible for managing and complying with all applicable federal, state, and local laws and regulations relating to ACM.

#### 5.3 LEAD-BASED PAINT

The Transferee is hereby notified that LBP is presumed present in nonresidential buildings, structures, or facilities within the parcel proposed for transfer based on the age of construction (that is, the building or structure was constructed before the Consumer Product Safety Commission's 1978 ban on LBP for residential use). The Property contains Building 819, built in 1957, and Building 823 (construction date unknown), which may contain LBP. Lead (from LBP) may exist in soil surrounding Buildings 819 and 823. LBP may have been stripped from the building through normal weathering. The deed will contain a notice stating that Buildings 819 and 823 were built before 1978 (or presumed built before 1978 in the case of Building 823) and are therefore presumed to contain LBP because of their age. Lead from paint, paint chips, and dust can pose health hazards if not managed properly.

With respect to any such nonresidential buildings, structures, or facilities which the Transferee intends to demolish and redevelop, the Transferee may, under applicable law or regulation, be required by DTSC or other regulatory agencies to evaluate the soil adjacent to these nonresidential buildings, structures, or facilities for soil-lead hazards, and to abate any such hazards that may be present, after demolition and prior to construction of any structures.

#### 5.4 PESTICIDES

The Transferee is hereby notified that the Property may contain pesticide residue from pesticides that have been applied in the management of the real property. The Navy knows of no use of any registered pesticide in a manner inconsistent with its labeling and believes that all applications were made in accordance with the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) (7 U.S.C. § 136, et seq.), its implementing regulations, and according to the labeling provided with such substances. It is the Navy's position that it shall have no obligation under the covenants provided pursuant to § 120(h)(3)(A)(ii) of CERCLA, 42 U.S.C. § 9620(h)(3)(A)(ii), for the remediation of legally applied pesticides.

#### 6.0 RESTRICTIONS

CERCLA Institutional Controls. In accordance with RODs prepared pursuant to CERCLA for the Property, ICs will be implemented to prevent exposure to chemicals of concern in soil and groundwater on the Property (Navy 2009b, 2009c; ChaduxTt 2010). These restrictions will be incorporated into two separate legal instruments: (1) the quitclaim deed(s) between the Navy and the Transferee(s); and (2) a CRUP between the Navy and DTSC, with EPA as a third-party beneficiary. The ICs will apply to any and all property within the ARICs (Figure 5).

All of the Property will be subject to ICs related to soil and groundwater. In addition, ICs have been selected in the RODs to address potential vapor intrusion from VOCs in soil vapor and groundwater. Risk to human health may exist from potential intrusion of VOC vapors into structures built at the Property in certain areas as designated on Figure 5. Consequently, these areas are included in the ARICs for VOC vapors at the Property. If enclosed structures are to be constructed on the Property in the ARICs subject to potential vapor intrusion, engineering controls or other design alternatives to assure vapors are reduced to acceptable levels must be implemented and the requirement for engineering controls or other design alternatives will be enforced through a recorded deed restriction and a restrictive covenant between DTSC and the Navy.

The IC land use restrictions for the Property are as follows:

• The following activities are prohibited throughout the Property:

- O Growing vegetables, fruits, or any edible items in native soil for human consumption. Plants for human consumption may be grown if they are planted in raised beds (above the CERCLA-approved cover) containing non-native soil. Trees producing edible fruit (including trees producing edible nuts) may also be planted provided they are grown in containers with a bottom that prevents the roots from penetrating the native soil.
- Use of groundwater.
- The following activities are restricted throughout the Property unless prior written approval for these activities is granted by the FFA signatories:
  - "Land disturbing activity," which includes, but is not limited to: (1) excavation of soil, (2) construction of roads, utilities, facilities, structures, and appurtenances of any kind, (3) demolition or removal of "hardscape" (for example, concrete roadways, parking lots, foundations, and sidewalks), (4) any activity that involves movement of soil to the surface from below the surface of the land, and (5) any other activity that causes or facilitates movement of known contaminated groundwater. Land-disturbing activities are not intended to include placement of additional clean, imported fill on top of the soil cover that the Navy has constructed at the Property.
  - Alteration, disturbance, or removal of (i) any component of a response or cleanup action (including but not limited to revetment walls and shoreline protection and soil cover/containment systems); or (ii) groundwater extraction, injection, and monitoring wells and associated piping and equipment; or (iii) associated utilities.
  - Extraction of groundwater and installation of new groundwater wells with the exception of construction, operation, and maintenance responses or remedial actions as required or necessary under the CERCLA remedy.
  - Removal of or damage to security features of a CERCLA remedy or monitoring device (for example, locks on monitoring wells, survey monuments, fencing, signs, or monitoring equipment and associated pipelines and appurtenances).
- Construction of enclosed structures. Risk to human health may exist from potential intrusion of VOC vapors into structures built at portions of the Property. Consequently, these areas are included in the ARICs for VOC vapors (see Figure 5). Prior to construction of any new enclosed structure within a VOC ARIC, the Owner shall obtain approval from the FFA signatories of the vapor mitigation engineering controls or design alternatives to be incorporated in that structure. A reduction in potential risk can be achieved through engineering controls or other design alternatives that meet the specifications set forth in DTSC's "Final Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air" and "Final Vapor Intrusion Mitigation Advisory, Revision 1," both dated October 2011 (DTSC 2011b, 2011c). Prior to occupation of enclosed structures with a VOC ARIC, the Owner shall obtain FFA signatory approval that any necessary engineering controls or design alternatives have been properly constructed and are operating successfully.

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The IC objectives will be met by access controls until the time of transfer.

#### 7.0 COVENANTS

The deed will contain the following covenants.

All Remedial Action Has Been Taken. The deed will include a covenant by the United States, made pursuant to the provisions of CERCLA § 120(h)(3)(A)(ii)(I) and as set forth in DoD Instruction 4165.72. The covenant will warrant that all remedial action necessary to protect human health and the environment with respect to any hazardous substance remaining on the Property has been taken before the date of transfer.

Additional Remediation Obligation. The deed will also include a covenant by the United States, made pursuant to the provisions of CERCLA § 120(h)(3)(A)(ii)(II) and as set forth in DoD Instruction 4165.72, warranting that any remedial action found to be necessary after the date of this deed shall be conducted by the United States.

**Right of Access.** The deed will contain a covenant by the Transferee, on behalf of itself, its successors and assigns, granting to the United States right of access to the Property, pursuant to the provisions of CERCLA § 120(h)(3)(A)(iii) and as set forth in DoD Instruction 4165.72, in any case in which any remedial or corrective action is found to be necessary after the date of transfer.

**Asbestos-Containing Material.** The Transferee covenants and agrees that in its use of the Property, including but not limited to demolition or handling of buildings, structures, facilities, or utilities containing ACM, it will be responsible for managing ACM and for complying with all applicable federal, state, and local laws relating to ACM.

The Transferee acknowledges that the Transferor assumes no liability for costs of any kind or for damages for personal injury, illness, disability, or death to the Transferee, or to any other person, including members of the general public, arising from or incident to the purchase, transportation, removal, handling, use, disposition, or activity causing or leading to contact of any kind whatsoever with ACM in the improvements including, but not limited to, the buildings, structures, facilities, and utilities (both underground and aboveground) on the Property, arising after the conveyance of the Property from the Transferor to the Transferee, whether the Transferee has properly warned, or failed to properly warn the persons injured.

If ACM within a building, structure, or facility on the Property may pose a threat to human health within the building, structure, or facility (that is, friable, accessible and damaged [FAD] ACM) at the time of transfer, the Transferee shall prohibit occupation of the building, structure, or facility until the ACM is abated or the building, structure, or facility is demolished by the Transferee in accordance with all applicable local, state, and federal laws and other requirements relating to asbestos or ACM.

Lead-Based Paint. The deed will contain a covenant that the Transferee, in its use and occupancy of the Property, including but not limited to demolition of buildings, structures, or facilities, and identification and/or evaluation of any LBP hazards, shall be responsible for managing LBP and LBP hazards in accordance with applicable federal, state, and local laws and other requirements relating to LBP and LBP hazards. Furthermore, the Transferee will prohibit residential occupancy and use of buildings and structures, or portions thereof, prior to identification and evaluation of any LBP hazards, and abatement of any hazards identified as required.

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#### 8.0 FINDING OF SUITABILITY TO TRANSFER

Based of	on the information contained in this FOST and the	the notifications,	restrictions,	anc
covenan	its that will be contained in the deed, the Property is su	iitable for transfer		
<b>c</b> .		D /		
Signatur		Date:		
	Mr. Lawrence Lansdale, PE			
	By direction of the Director			
	BRAC Program Management Office West			

#### 9.0 REFERENCES

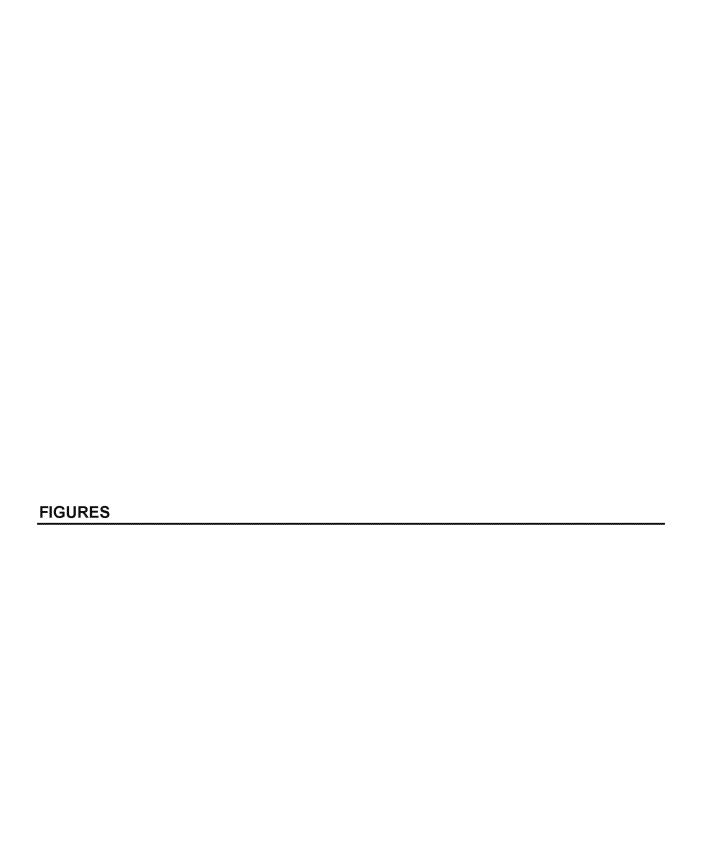
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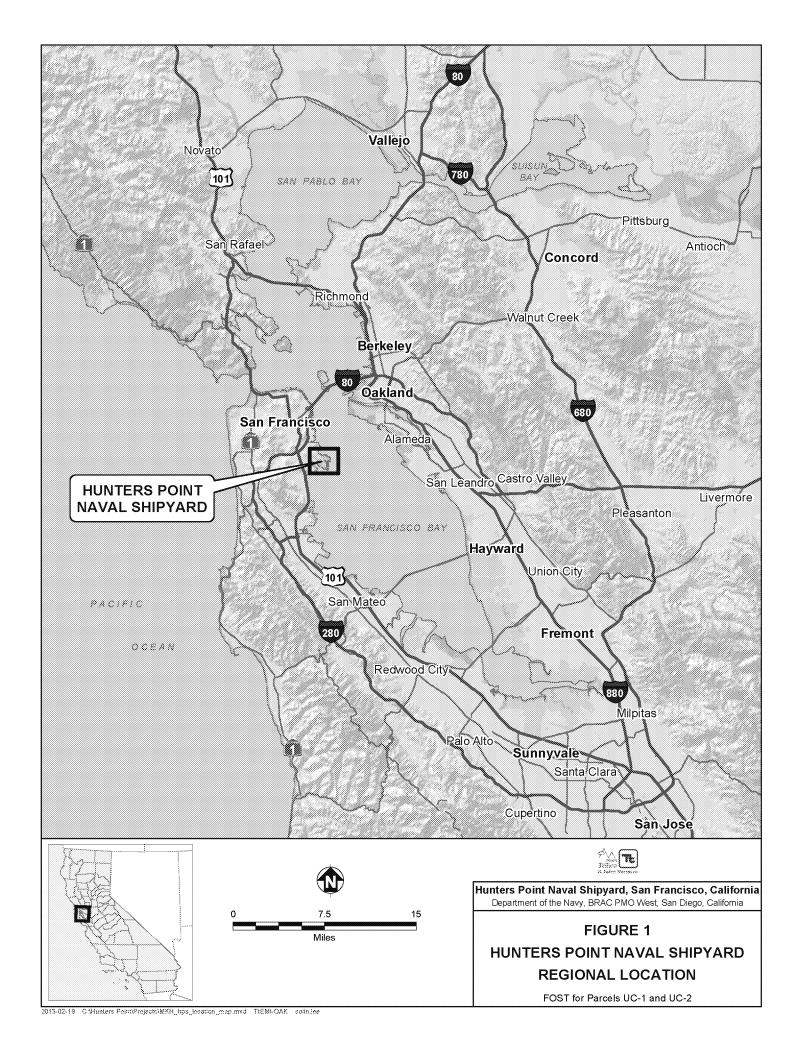
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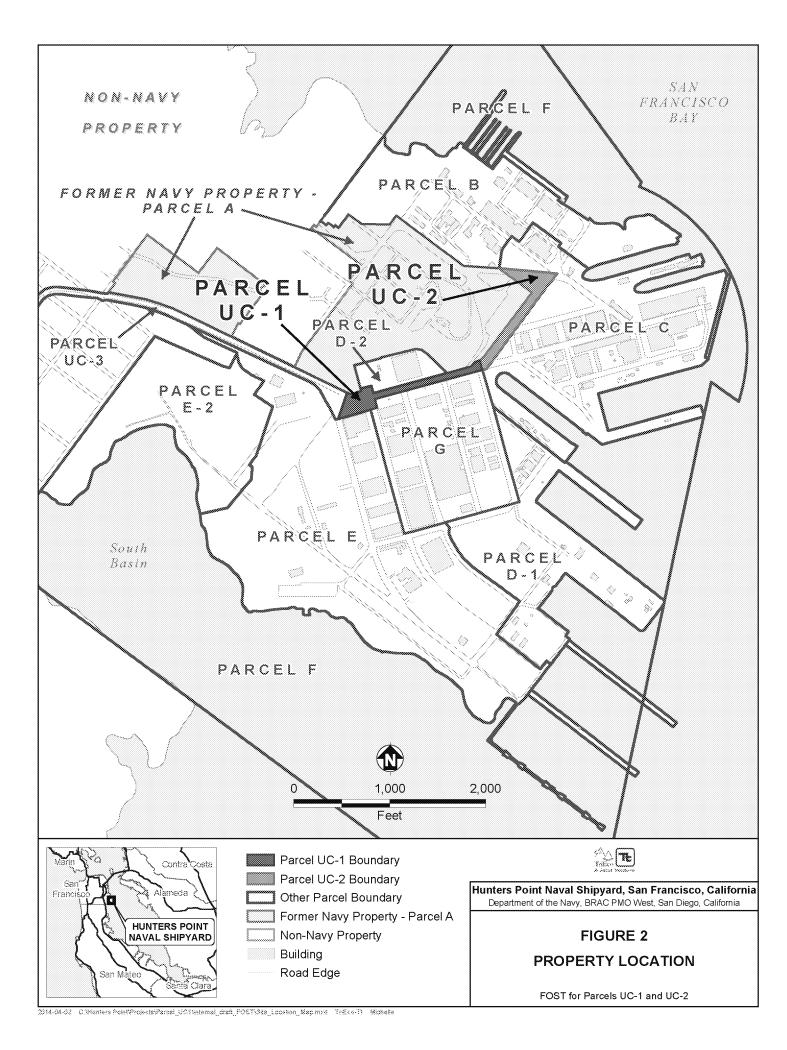
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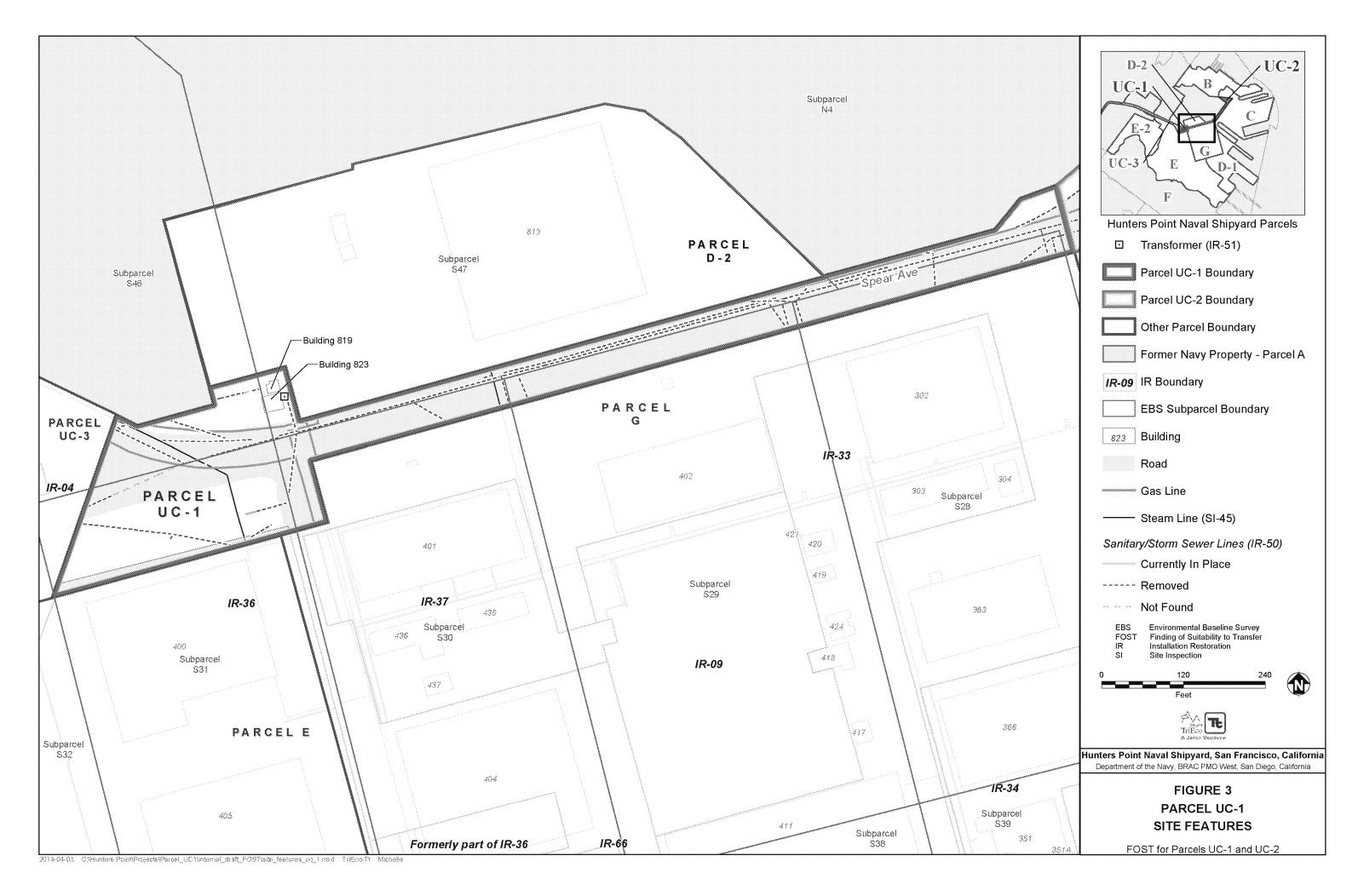
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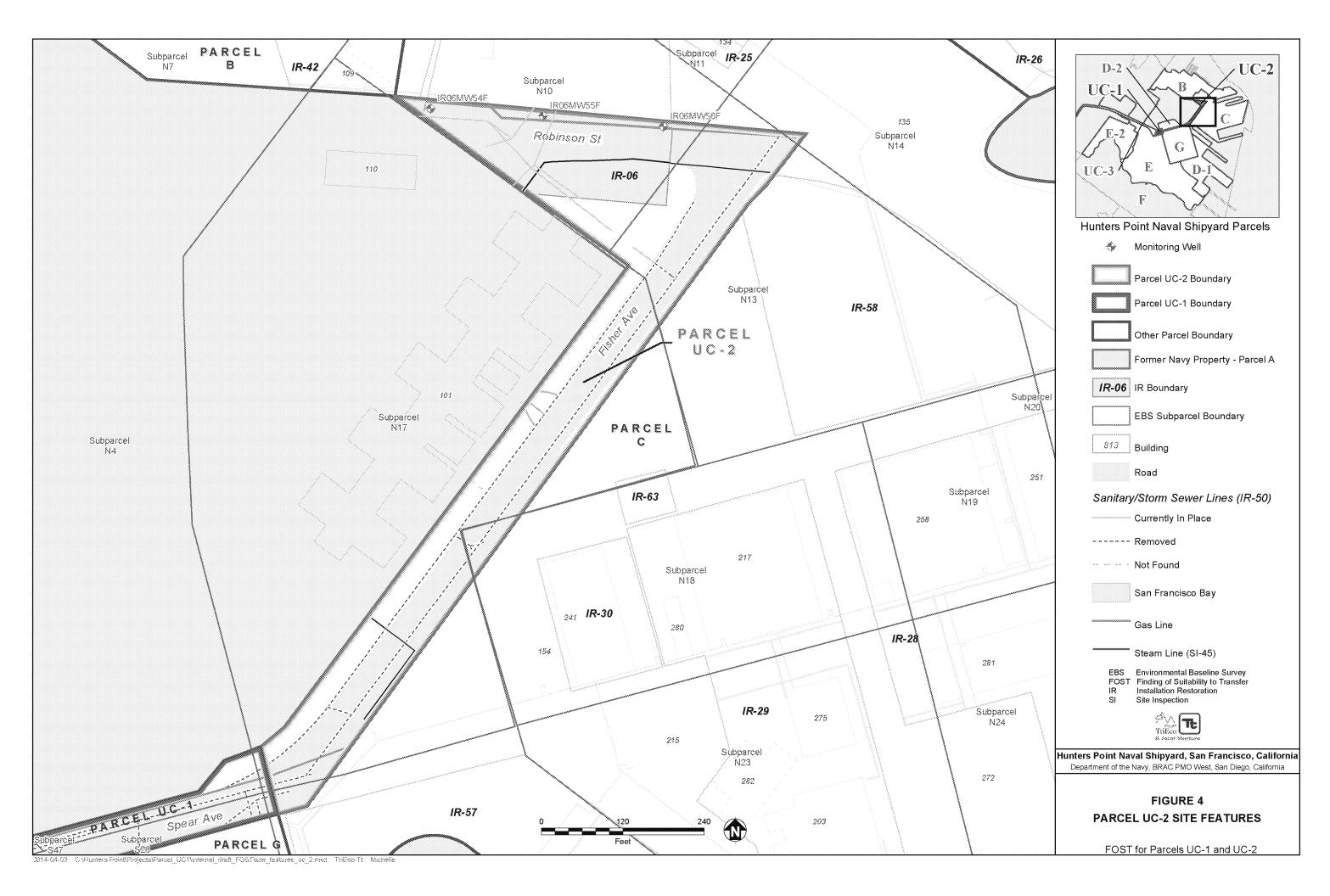
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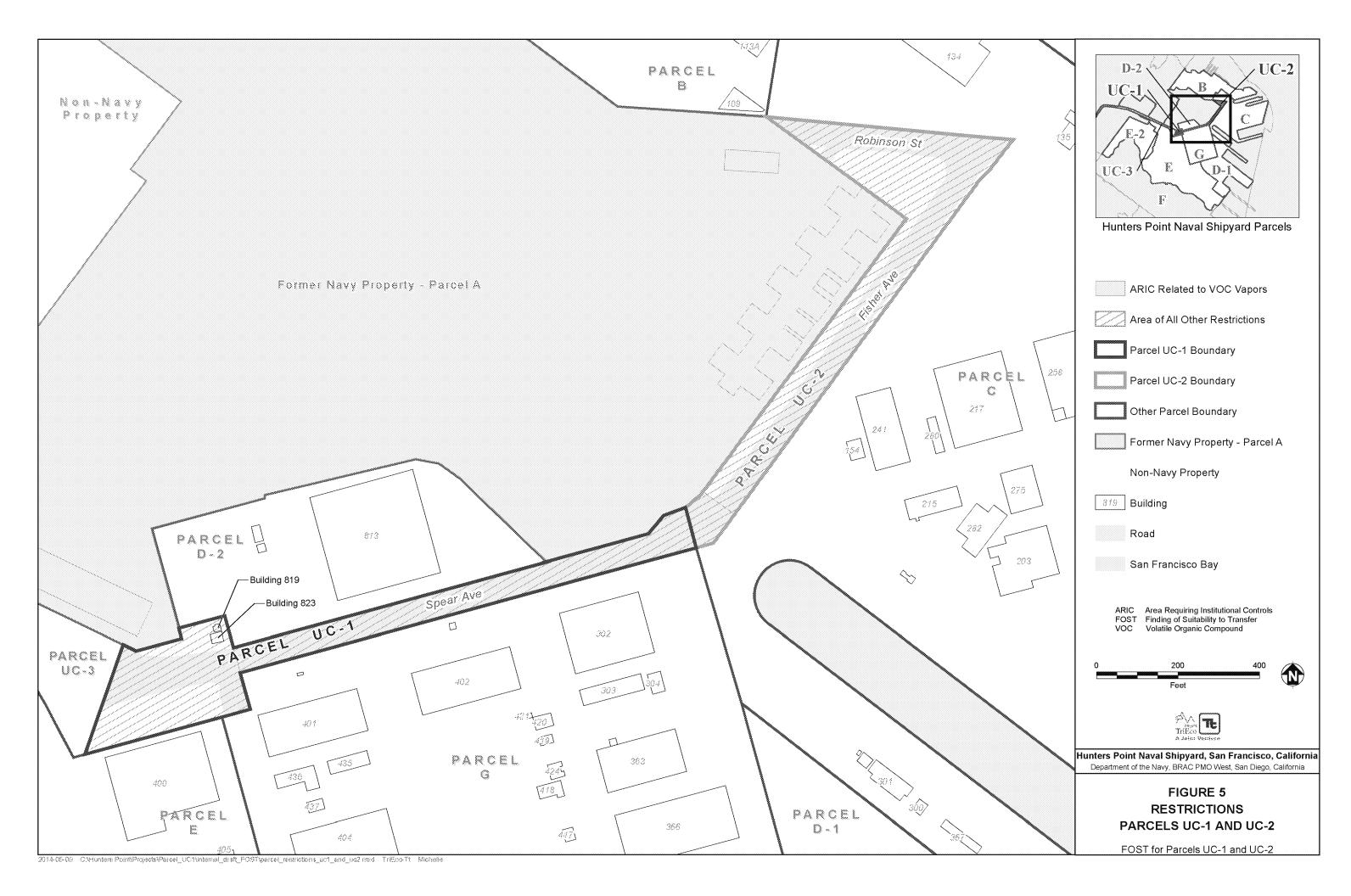


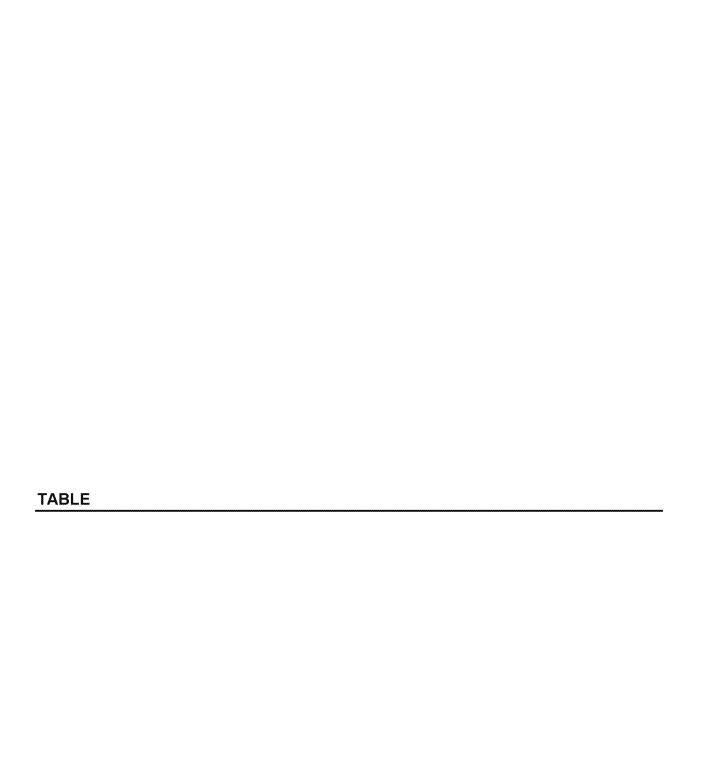












#### **TABLE 1: ENVIRONMENTAL REQUIREMENTS**

Finding of Suitability to Transfer for Parcels UC-1 and UC-2 Hunters Point Naval Shipyard, San Francisco, California

		Environmental Requirements								
Applicable to the Parcels	CERCLA	Presence of Petroleum Products and Derivatives	UST and AST	Munitions and Explosives of Concern	Asbestos- Containing Material	Lead- Based Paint	Polychlorinated Biphenyls			
UC-1	Yes	No	No	No	Yes	Yes	Yes			
UC-2	Yes	No	No	No	No	No	No			

#### Notes:

AST Aboveground storage tank

CERCLA Comprehensive Environmental Response, Compensation, and Liability Act

UST Underground storage tank



TABLE A-1. SUMMARY OF HAZARDOUS SUBSTANCES STORED, DISPOSED OF, OR RELEASED – PARCELS UC-1 AND UC-2 Finding of Suitability to Transfer for Parcels UC-1 and UC-2, Hunters Point Naval Shipyard, San Francisco, California

Parcel	Medium	Hazardous Substance <sup>a,b</sup>	CAS Number	Regulatory Synonym	RCRA Waste Code	Reportable Quantity	Estimated Quantity	Dates of Storage, Disposal or Release (if known)	Stored (S), Disposed of (D) or Released (R)	Action Taken (Date)
UC-2	Groundwater	2-Butanone	78-93-3	MEK; Methyl Ethyl Ketone	U159	2270 kg	Unknown	Unknown	R	
UC-2	Groundwater	Antimony	7440-36-0	None	NA	0.454 kg	Unknown	Unknown	R	
UC-2	Groundwater	Arsenic	7440-38-2	None	D004	0.454 kg	Unknown	Unknown	R	
UC-2	Groundwater	Barium	7440-39-3	None	D005	454 kg	Unknown	Unknown	R	
UC-2	Groundwater	Cadmium	7440-43-9	None	D006	4.54 kg	Unknown	Unknown	R	
UC-2	Groundwater	Carbon tetrachloride	56-23-5	Methane, Tetrachloro	U211	4.54 kg	Unknown	Unknown	R	
UC-2	Groundwater	Chlorobenzene	108-90-7	Benzene, Chloro-	U037	45.4 kg	Unknown	Unknown	R	
UC-2	Groundwater	Chloroform	67-66-3	Methane, Trichloro-	U044	4.54 kg	Unknown	Unknown	R	
UC-2	Groundwater	Chromium	7440-47-3	None	NA	2270 kg	Unknown	Unknown	R	
UC-2	Groundwater	Chromium VI	NA	None	NA	NA	Unknown	Unknown	R	
UC-2	Groundwater	Cobalt	7440-48-4	None	NA	0.454 kg	Unknown	Unknown	R	Remedial Action,
UC-2	Groundwater	Copper	7440-50-8	None	NA	2270 kg	Unknown	Unknown	R	Monitored Natural
UC-2	Groundwater	Heptachlor epoxide	1024-57-3	None	NA	0.454 kg	Unknown	Unknown	R	Attenuation (2010)
UC-2	Groundwater	Iron	7439-89-6	None	NA	NA	Unknown	Unknown	R	
UC-2	Groundwater	Manganese	7439-96-5	None	NA	NA	Unknown	Unknown	R	
UC-2	Groundwater	Nickel	7440-02-0	None	NA	45.4 kg	Unknown	Unknown	R	
UC-2	Groundwater	Selenium	7782-49-2	None	NA	45.4 kg	Unknown	Unknown	R	
UC-2	Groundwater	Thallium	7440-28-0	None	NA	454 kg	Unknown	Unknown	R	
UC-2	Groundwater	Toluene	108-88-3	Benzene, Methyl-	U220	454 kg	Unknown	Unknown	R	
UC-2	Groundwater	Trichloroethene	79-01-6	Ethene, Trichloro-; Trichloroethylene	U228	45.4 kg	Unknown	Unknown	R	
UC-2	Groundwater	Vanadium	7440-62-2	None	NA	NA	Unknown	Unknown	R	
UC-2	Groundwater	Zinc	7440-66-6	None	NA	454 kg	Unknown	Unknown	R	
UC-2	Soil Gas	1,2,4-Trimethylbenzene	95-63-6	None	NA	NA	Unknown	Unknown	R	
UC-2	Soil Gas	1,3,5-Trimethylbenzene	108-67-8	None	NA	NA	Unknown	Unknown	R	
UC-2	Soil Gas	Acetone	67-64-1	2-Propanone	U002	2270 kg	Unknown	Unknown	R	
UC-2	Soil Gas	Benzaldehyde	100-52-7	None	NA	NA NA	Unknown	Unknown	R	
UC-2	Soil Gas	Benzene	71-43-2	None	U019	4.54 kg	Unknown	Unknown	R	
UC-2	Soil Gas	Cyclohexane	110-82-7	None	U056	454 kg	Unknown	Unknown	R	
UC-2	Soil Gas	Methylcyclohexane	108-87-2	None	NA	NA	Unknown	Unknown	R	Record of Decision
UC-2	Soil Gas	m,p-Xylene	1330-20-7	Benzene, Dimethyl-	U239	45.4 kg	Unknown	Unknown	R	(institutional controls)
UC-2	Soil Gas	o-Xylene	95-47-6	None	NA	454 kg	Unknown	Unknown	R	(2009)
UC-2	Soil Gas	Tetrachloroethene	127-18-4	Ethene, Tetrachloro-; Perchloroethylene; Tetrachloroethylene	U210	45.4 kg	Unknown	Unknown	R	,
UC-2	Soil Gas	Toluene	108-88-3	Benzene, Methyl-	U220	454 kg	Unknown	Unknown	R	
UC-2	Soil Gas	Trichloroethene	79-01-6	Ethene, Trichloro-; Trichloroethylene	U228	45.4 kg	Unknown	Unknown	R	
UC-1	Soil	Cesium-137	NA	None	NA	1 Curie	Unknown	Unknown	R	
UC-1	Soil	Radium-226	NA	None	NA	0.1 Curie	Unknown	Unknown	R	Padiological TODA f
UC-1	Soil	Strontium-90	NA	None	NA	0.1 Curie	Unknown	Unknown	R	Radiological TCRA for
UC-2	Soil	Cesium-137	NA	None	NA	1 Curie	Unknown	Unknown	R	Parcels UC-1 and UC-2
UC-2	Soil	Radium-226	NA	None	NA	0.1 Curie	Unknown	Unknown	R	(2008-2010)
UC-2	Soil	Strontium-90	NA	None	NA	0.1 Curie	Unknown	Unknown	R	
UC-1	Soil Gas	1,1,1-Trichloroethane	71-55-6	Ethane, 1,1,1-Trichloro; Methyl Chloroform	U226	454 kg	Unknown	Unknown	R	
UC-1	Soil Gas	1,1,2,2-Tetrachloroethane	79-34-5	Ethane, 1,1,2,2-Tetrachloro-	U209	45.4 kg	Unknown	Unknown	R	
UC-1	Soil Gas	1,1,2-Trichloro 1,2,2- trifluoroethane	76-13-1	Freon 113	NA	NA	Unknown	Unknown	R	Record of Decision (institutional controls)
UC-1	Soil Gas	1,1-Dichloroethene	75-35-4	Ethene, 1,1-Dichloro-; Vinlyidene Chloride; 1-1- Dichloroethylene	U078	45.4 kg	Unknown	Unknown	R	(2009)
UC-1	Soil Gas	1,2,4-Trimethylbenzene	95-63-6	None	NA	NA	Unknown	Unknown	R	
UC-1	Soil Gas	1,2-Dichloroethene (total)	540-59-01	None	NA	NA	Unknown	Unknown	R	

Appendix A, FOST, Parcels UC-1 and UC-2, HPNS

TABLE A-1. SUMMARY OF HAZARDOUS SUBSTANCES STORED, DISPOSED OF, OR RELEASED – PARCELS UC-1 AND UC-2 Finding of Suitability to Transfer for Parcels UC-1 and UC-2, Hunters Point Naval Shipyard, San Francisco, California

			I			T	ī		l l	
Parcel	Medium	Hazardous Substance <sup>a,b</sup>	CAS Number	Regulatory Synonym	RCRA Waste Code	Reportable Quantity	Estimated Quantity	Dates of Storage, Disposal or Release (if known)	Stored (S), Disposed of (D) or Released (R)	Action Taken (Date)
UC-1	Soil Gas	1,3,5-Trimethylbenzene	108-67-8	None	NA	NA	Unknown	Unknown	R	
UC-1	Soil Gas	1,4-Dichlorobenzene	541-73-1	Benzene, 1,3-Dichloro; m- Dichlorobenzene	U071	45.4 kg	Unknown	Unknown	R	
UC-1	Soil Gas	2-Butanone	78-93-3	MEK; Methyl Ethyl Ketone	U159	2270 kg	Unknown	Unknown	R	
UC-1	Soil Gas	4-Methyl-2-pentanone	108-10-1	Hexone; Methyl Isobutyl Ketone	U161	2270 kg	Unknown	Unknown	R	
UC-1	Soil Gas	Acetone	67-64-1	2-Propanone	U002	2270 kg	Unknown	Unknown	R	
UC-1	Soil Gas	Benzene	71-43-2	None	U019	4.54 kg	Unknown	Unknown	R	
UC-1	Soil Gas	Bromomethane	74-83-9	Methane, Bromo-; Methyl Bromide	U029	454 kg	Unknown	Unknown	R	
UC-1	Soil Gas	Carbon disulfide	75-15-0	None	P022	45.4 kg	Unknown	Unknown	R	
UC-1	Soil Gas	Carbon tetrachloride	56-23-5	Methane, Tetrachloro	U211	4.54 kg	Unknown	Unknown	R	
UC-1	Soil Gas	Chlorobenzene	108-90-7	Benzene, Chloro-	U037	45.4 kg	Unknown	Unknown	R	Poul (Police
UC-1	Soil Gas	Chloroform	67-66-3	Methane, Trichloro-	U044	4.54 kg	Unknown	Unknown	R	
UC-1	Soil Gas	Chloromethane	74-87-3	Methane, Chloro-; Methyl Chloride	U045	45.4 kg	Unknown	Unknown	R	
UC-1	Soil Gas	cis-1,2-Dichloroethene	156-60-5	Ethene, 1,2-Dichloro; 1,2- Dichloroethylene	U079	454 kg	Unknown	Unknown	R	
UC-1	Soil Gas	Cyclohexane	110-82-7	None	U056	454 kg	Unknown	Unknown	R	Record of Decision
UC-1	Soil Gas	Dichlorodifluoromethane	75-71-8	Freon 12	NA	NA	Unknown	Unknown	R	(institutional controls) (2009)
UC-1	Soil Gas	Ethylbenzene	100-41-4	None	NA	454 kg	Unknown	Unknown	R	(2009)
UC-1	Soil Gas	Isopropylbenzene	98-82-8	Cumene	NA	NA	Unknown	Unknown	R	
UC-1	Soil Gas	m,p-Xylene	1330-20-7	Benzene, Dimethyl-	U239	45.4 kg	Unknown	Unknown	R	
UC-1	Soil Gas	Methylcyclohexane	108-87-2	None	NA	NA	Unknown	Unknown	R	
UC-1	Soil Gas	Methylene chloride	75-09-2	Dichloromethane; Methane, Dichloro-	U080	454 kg	Unknown	Unknown	R	
UC-1	Soil Gas	o-Xylene	95-47-6	None	NA	454 kg	Unknown	Unknown	R	
UC-1	Soil Gas	para-Isopropyl toluene	99-87-6	p-Cumene	NA	NA	Unknown	Unknown	R	
UC-1	Soil Gas	Propylbenzene	103-65-1	None	NA	NA	Unknown	Unknown	R	
UC-1	Soil Gas	Styrene	100-42-5	None	NA	454 kg	Unknown	Unknown	R	
UC-1	Soil Gas	Tetrachloroethene	127-18-4	Ethene, Tetrachloro-; Perchloroethylene; Tetrachloroethylene	U210	45.4 kg	Unknown	Unknown	R	
UC-1	Soil Gas	Toluene	108-88-3	Benzene, Methyl-	U220	454 kg	Unknown	Unknown	R	
UC-1	Soil Gas	trans-1,2-Dichloroethene	156-60-5	Ethene, 1,2-Dichloro; 1,2- Dichloroethylene	U079	454 kg	Unknown	Unknown	R	
UC-1	Soil Gas	Trichloroethene	79-01-6	Ethene, Trichloro-; Trichloroethylene	U228	45.4 kg	Unknown	Unknown	R	
UC-1	Soil Gas	Trichlorofluoromethane	75-65-4	Freon 11	NA	NA	Unknown	Unknown	R	
UC-1	Soil Gas	Vinyl chloride	75-01-4	Ethene, Chloride	U043	0.454 kg	Unknown	Unknown	R	

The information contained in this notice is required under the authority of regulations promulgated under Section 120(h) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or "Superfund") 42 U.S.C. Section 9620(h).

#### Notes:

This table was prepared in accordance with 40 CFR 373 and 40 CFR 302.4. The substances that do not have a chemical-specific breakdown (and associated annual reportable quantity) are not listed in 40 CFR 302.4, and therefore no corresponding regulatory synonyms, no RCRA waste numbers, and no reportable quantities are available.

The property may contain residue from pesticides that have been applied in management of the property. The Navy knows of no use of any registered pesticide in a manner inconsistent with its labeling and believes that all applications were made in accordance with the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA; 7 United States Code [U.S.C.] Section 136, et seq.), its implementing regulations, and according to the labeling provided with threes substances. It is the Navy's position that it shall have no obligation under the covenants provided pursuant to Section 196(20(h)(3)(A)(ii) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. Section 96(20(h)(3)(A)(ii)) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. Section 96(20(h)(3)(A)(iii)) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. Section 96(20(h)(3)(A)(iii)) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. Section 96(20(h)(3)(A)(iii)) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. Section 96(20(h)(3)(A)(iii)) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. Section 96(20(h)(3)(A)(iii)) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. Section 96(20(h)(3)(A)(iii)) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. Section 96(20(h)(3)(A)(iii)) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. Section 96(20(h)(3)(A)(iii)) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. Section 96(20(h)(3)(A)(iii)) of the Comprehensive Environmental Response, Compensation, and the Compensation and Compensati

## TABLE A-1. SUMMARY OF HAZARDOUS SUBSTANCES STORED, DISPOSED OF, OR RELEASED – PARCELS UC-1 AND UC-2 Finding of Suitability to Transfer for Parcels UC-1 and UC-2, Hunters Point Naval Shipyard, San Francisco, California

					RCRA			Dates of Storage,	Stored (S),	
					Waste	Reportable	Estimated	Disposal or Release	Disposed of (D)	
Parcel	Medium	Hazardous Substance <sup>a,b</sup>	CAS Number	Regulatory Synonym	Code	Quantity	Quantity	(if known)	or Released (R)	Action Taken (Date)

CAS Chemical Abstract Service
CFR Code of Federal Regulations

FIFRA Federal Insecticide, Fungicide, and Rodenticide Act of 1972

kg Kilogram NA Not Applicable

RCRA Resource Conservation and Recovery Act

TCRA Time-Critical Removal Action U.S.C. United States Code

Sources:

ChaduxTt. 2010. Final Remedial Design Package, Parcels UC-1 and UC-2, Hunters Point Shipyard, San Francisco, California. December 22.

Navy. 2009a. Final Record of Decision for Parcels D-1 and UC-1, Hunters Point Shipyard, San Francisco, California. July 24.

Navy. 2009b. Final Record of Decision for Parcel UC-2, Hunters Point Shipyard, San Francisco, California. December 17.

Engineering/Remediation Resources Group, Inc. 2013. Final Remedial Action Completion Report for Parcels UC-1 and UC-2, Hunters Point Naval Shipyard, San Francisco, California. February 25.

Tetra Tech EC, Inc. 2011. Final Removal Action Completion Report, Parcels UC-1 and UC-2, Hunters Point Shipyard, San Francisco, California. March 2.



#### RESPONSES TO REGULATORY AGENCY COMMENTS ON THE REVISED DRAFT FINDING OF SUITABILITY TO TRANSFER (FOST) FOR PARCELS UC-1 AND UC-2, HUNTERS POINT NAVAL SHIPYARD, SAN FRANCISCO, CALIFORNIA, DATED MAY 6, 2013

The table below contains the responses to comments received from the regulatory agencies on the "Revised Draft Finding of Suitability to Transfer for Parcels UC-1 and UC-2, Hunters Point Naval Shipyard, San Francisco, California," dated May 6, 2013. The comments addressed below were received from the U.S. Environmental Protection Agency (EPA), the California Department of Toxic Substances Control (DTSC), the San Francisco Bay Regional Water Quality Control Board (Water Board), and the City and County of San Francisco Department of Public Health (city). Throughout this table, *italicized* text represents additions to the document and strikeout text indicates deletions. Also throughout this table, references to page, section, table, and figure numbers pertain to the new document unless otherwise indicated.

Comment Number	Section/ Page	Comment	Response to Comment
Responses t	o Comments from	ท U.S. Environmental Protection Agency (Craig Coopeเ	r, dated June 4, 2013)
General Con	nment		
1.		As was discussed during the resolution of EPA's comments on the Navy's Remedial Action Completion Report (RACR) for Parcels UC-1 and UC-2, it is EPA understanding that the Navy will undertake a soil vapor survey this year in Parcel UC-1 to accomplish the requirements of the Record of Decision (ROD) associated with Parcel UC-1 (see page 46 of the ROD covering Parcel UC-1). EPA will not be able to concur on the final FOST for Parcels UC-1 and UC-2 until this soil vapor survey is complete and its data results are integrated in to subject FOST.	The Navy completed a soil vapor investigation at Parcel UC-1 in October 2013 (Engineering/Remediation Resources Group, Inc. [ERRG] 2014). The FOST has been revised to incorporate the results of this investigation.
2.		The Navy's Final Operation and Maintenance Plan for Parcels UC-1 and UC-2 dated April 2013 appears to be omitted from the subject FOST. Please find an appropriate place in the FOST to present and reference this document.	The last paragraph of Section 3.1 has been expanded as follows.  "Long-term operation and maintenance (O&M) requirements for the durable covers at Parcels UC-1 and UC-2 are detailed in the final O&M plan (ERRG 2013b)."

Comment Number	Section/ Page	Comment	Response to Comment
3.		As a reminder, EPA's concurrence letter on the final FOST for Parcels UC-1 and UC-2 will include our usual reservations regarding post-transfer discoveries of hazardous substances, including pesticides.	The Navy notes and understands EPA's comment.

Comment Number	Section/ Page	Comment	Response to Comment
Specific Con	nments		
la.	Section 3.1, CERCLA	This section appears to have omitted reference to the Navy's final technical memorandum concerning the Navy's soil vapor survey in Parcel UC-2 and the upcoming soil vapor survey in Parcel UC-1 to be implemented by the Navy later this year. With respect to Parcel UC-2, the applicable soil gas survey report is the Navy's "Final Technical Memorandum, Soil Vapor Investigation in Support of Vapor Intrusion Assessment, Parcels B, D-1, G and UC-2 dated March 2013". This data report (and the future soil vapor data report associated with UC-1) should be presented in this section and identified in the References section as well. The data results and conclusions from each of these reports should be used to frame the rationale and size for the VOC ARIC(s), if any, at Parcels UC-1 and UC-2.	The last paragraph of Section 3.1 has been expanded as follows and the references to the soil gas survey reports have been added to Section 9.0.  "A soil gas survey was completed at Parcel UC-2 in 2010 (Sealaska Environmental Services [Sealaska] 2013). An additional soil gas survey was completed at Parcel UC-1 in 2013 (ERRG 2014). Results from these surveys have been used to revise the extent of areas requiring institutional controls (ARIC) for volatile organic compound (VOC) vapors through review and approval by the FFA signatories of a memorandum from the Navy BRAC Environmental Coordinator (BEC) to the administrative record file addressing the revised VOC ARIC boundary as a nonsignificant change to the remedy selected in the RODs (see 55 Federal Register 8772, March 8, 1990) (Navy 2014). Figure 5 shows the ARICs for VOC vapors as currently envisioned based on the results of the soil gas surveys. There are currently no buildings or enclosed structures within the VOC ARICs associated with the Property."

Comment Number	Section/ Page	Comment	Response to Comment
1b.	Section 3.1, CERCLA, Page 3, 3 <sup>rd</sup> Paragraph	This paragraph states that no soil samples have been collected at the Property (i.e. Parcels UC-1 and UC-2), except for those associated with the radiological removals. However, Table A-1 indicates some limited soil sampling for Arsenic and Manganese occurred in 2012. Please clarify or correct the text as needed.	Table A-1 has been revised to remove the entries for arsenic and manganese for soil samples at Parcels UC-1 and UC-2. No soil samples, except those associated with radiological removals and geotechnical samples associated with the soil gas survey, have been collected at Parcels UC-1 and UC-2. The former entries on Table A-1 had been added to represent the ubiquitous metals expected to occur in native soil throughout HPNS.
1c.	Section 3.1, CERCLA, Page 3, 4 <sup>th</sup> Paragraph	The dates of EPA, DTSC, and Water Board approval of the Navy's Final RACR for Parcels UC-1 and UC-2 should be identified in this section and provided in the References section as well.	The text has been expanded to include appropriate references for the approval of the RACR (ERRG 2013a).

Comment Number	Section/ Page	Comment	Response to Comment
2.	Section 3.1.1, IR Site 6	Please re-check the text of the first paragraph of this section and confirm that it is consistent with the Navy's Final Technical Memorandum, Soil Vapor Investigation in Support of Vapor Intrusion Assessment, Parcels B, D-1, G and UC-2 dated March 2013 ("Tech Memo"). The text of FOST does not appear to be consistent with the text and figures (e.g. Figure 8-5) of that Tech Memo. EPA assumes that the Tech Memo will be the primary basis for VOC ARICs in Parcel UC-2, if any.	"Restrictions applied within an area requiring institutional controls (ARIC) for VOC vapors at Parcel UC-2 address the potential vapor intrusion risk from this plume while remediation is in progress (Figure 5). However, results from soil gas samples collected above the plume in 2010 did not indicate concentrations that would pose an unacceptable risk to potential future residential receptors via vapor intrusion. Results from this survey have been used to revise the extent of the ARICs for VOC vapors through review and approval by the FFA signatories of a memorandum from the Navy BEC to the administrative record file addressing the revised VOC ARIC boundary as a non-significant change to the remedy selected in the ROD (Navy 2014). Figure 5 shows the ARICs for VOC vapors as currently envisioned based on the results of the soil gas survey."

Comment Number	Section/ Page	Comment	Response to Comment
3.	Section 4.0, Adjacent Parcels	Please edit the text in the first paragraph (on bottom of Page 6) and the subsection on Parcel G (on top of Page 8) concerning soil gas surveys in Parcel UC-1 to be consistent with the Navy's response to EPA General Comment #1.	The first paragraph of Section 4.0 has been revised to delete the sentence "However, ICs placed on the Property will address this potential risk (see Section 6.0)." The text has been expanded to add Subsection 4.2 to discuss soil gas at adjacent parcels.
			The text describing Parcel G has not been revised because this text refers only to the potential for migration of chemicals in groundwater. However, the report has been revised to add a heading "4.1 Groundwater" to indicate the following text is related to contamination in groundwater.
4.	Section 6.0, References	As discussed in EPA General Comment #1 and EPA Specific Comment #3, please make edits in Section 6.0 [Restrictions] so the narrative concerning soil vapor data and VOC ARICs are consistent throughout the FOST.	No adjustments to the text of Section 6.0 were necessary based on EPA general comment 1 and EPA specific comment 3. Figure 5 has been revised to show the ARICs for VOC vapors as currently envisioned based on the results of the soil gas surveys.

Comment Number	Section/ Page	Comment	Response to Comment
5.	Section 7.0, Covenants, Asbestos- Containing Material (ACM)	The first sentence of the third paragraph of this section implies that an inspection of the current condition of the ACM will occur at the time of the transfer to determine if the ACM poses a threat to human health within the building, structure, or facility. Is the Navy sure it wishes to conduct such an inspection at the time of transfer? Since damaged ACM was discover during the 1993 survey, it may simpler to prohibit occupation of the buildings, structures, or facilities at the Property until such time the ACM is abated by the Transferee or the building, structure or facility is demolished by the Transferee.	The Navy appreciates EPA's suggestion. However, the Navy contemplates that any cleanup and abatement required to address potential exposure related to "standing buildings" will be addressed by the transferee pursuant to a negotiated conveyance document. The Navy also agrees with EPA that occupation of the buildings, structures, or facilities should be prohibited until such time as ACM is abated or the buildings, structures, or facilities are demolished by the transferee. The report was not changed as a result of this comment.
Responses t	o Additional Con	nments from U.S. Environmental Protection Agency (Lil	y Lee, dated June 23, 2014)
1.	EPA Specific Comment 1a	The Navy's response to EPA's Specific Comment 1a explains that the Navy is preparing a memo to file to document the change in the VOC ARIC. The memo to file will be submitted to the FFA signatories for approval and will be finalized before the FOST. Treating the VOC ARIC change as insignificant (and doing a memo to file rather than an ESD) seems fine, since the ROD contemplates modification of the VOC ARIC (see pp. 49-50). However, we would like to potentially revisit this document after we review the upcoming memo to the file and the RACR in case they would affect language in this document.	The FOST has been updated to include a reference to the memorandum to file.

Comment Number	Section/ Page	Comment	Response to Comment
2.		The descriptions of the IC land use restrictions in Section 6 of the FOST differ slightly from the restrictions as set forth on p. 49 of the ROD. In particular, the language about allowing raised beds and trees grown in containers is not in the ROD. The wording is also slightly different in the last two bullet points on p. 12. This is probably fine, since it does not appear to alter the ROD in any material way, but we are flagging it.	Comment noted. The language differs slightly from similar text in the RODs (Parcel UC-2 and Parcels D-1 and UC-1) because the Navy seeks consistency in the deeds with respect to restrictions. The slight differences in language are not significant. The text was not revised as a result of this comment.
3.	EPA General Comment 3	EPA's General Comment 3 states that EPA's concurrence letter will include our usual reservations about post-transfer discoveries of hazardous substances, including pesticides. This point is particularly relevant to the following statement in section 5.4 of the FOST: "It is the Navy's position that it shall have no obligation under the covenants provided pursuant to [CERCLA section 120(h)] for the remediation of legally applied pesticides."	Comment noted. The text was not revised as a result of this comment.

Comment Number	Section/ Page	Comment	Response to Comment
Responses t	o Additional Con	nments from U.S. Environmental Protection Agency (Lil	ly Lee, dated November 12, 2014)
1.	Page 1, Section 2.0 Property Description	The Parcel UC-2 ROD anticipates future uses of "Mixed Use" for Redevelopment Block 10 and Research and Development for Redevelopment Block 17 (see p. 8). The Parcel UC-1 ROD anticipates "Mixed Use" for Redevelopment Block 38 (see p. 8). These Redevelopment Blocks do not cover the entire parcels. The 2010 reuse plan expanded reuse options at the Property to include residential use options potentially beyond those current boundaries. Notwithstanding the 2010 amended reuse plan, and in accordance with the Parcel UC-1 and Parcel UC-2 Land Use Control Remedial Design, residential use in Parcels UC-1 and UC-2 continues to be restricted in areas designated for open space, educational/cultural, and industrial land uses in the 1997 reuse plan, unless prior written approval is granted by the FFA signatories. Please revise the language in the FOST to convey this more clearly.	The record of decision (ROD) for Parcel UC-2 does not contain a restriction related to residential reuse. Restricted activities are described on pages 44 and 45 of the ROD (see "Activity Restrictions that Apply throughout Parcel UC-2" within Section 2.9.2, Description of Selected Remedy). Similarly, the ROD for Parcels D-1 and UC-1 does not contain a restriction related to residential reuse within Parcel UC-1. Restricted activities are described on pages 48 through 50 of the ROD. Although the ROD does restrict residential reuse, the restricted area is limited to Parcel D-1 and does not include Parcel UC-1.  Please also refer to the response to EPA specific comment 3 (from Mark Ripperda dated March 29, 2011) on the draft finding of suitability to transfer (FOST), which addresses the same issue.
			The report was not changed as a result of this comment.

Comment Number	Section/ Page	Comment	Response to Comment
2.	Page 3, Section 3.1 CERCLA, Last Paragraph	Please update the reference to a "Forthcoming" addendum to the final Remedial Action Completion Report.	This reference referring to concurrence with the RACR addendum has been updated.

Comment Number	Section/ Page	Comment	Response to Comment
3.	Page 4,	The last sentence of the first paragraph states, "Figure 5	The Navy acknowledges that the Five-Year Review
	Section 3.1	shows the ARICs for VOC vapors as currently	process will consider any updates in regulatory
	CERCLA,	envisioned based on the results of the soil gas surveys."	guidance and that any Risk Management Plan that is
	First Paragraph	Please note that in accordance with Assessing	relied upon as a mechanism to implement land use
		Protectiveness at Sites for Vapor Intrusion Supplement	controls or any work plans submitted for future
		to the "Comprehensive Five-Year Review Guidance"	construction will address the potential for new
		(OSWER Directive 9200.2-84), the Five Year Review	construction to create new conduits for vapor
		process will revisit previous assumptions about	intrusion. However, the purpose of the FOST is to
		remediation goals and protectiveness of remedies using	summarize how the requirements and notifications for
		updated information from multiple lines of evidence.	hazardous substances, petroleum products, and other
		Please also note that the <i>Draft OSWER Guidance for</i>	regulated materials have been satisfied in order to a
		Evaluating the Vapor Intrusion to Indoor Air Pathway	support a determination that the property is suitable
		from Groundwater and Soil (Subsurface Vapor Intrusion	for transfer. Information regarding the Five-Year
		Guidance) (EPA 530-D-02-004), states that multiple	Review process, and representations regarding what a
		lines of evidence should be used to determine concerns	Risk Management Plan or a work plan submitted in
		regarding vapor intrusion. Finally, future owners may	the future for approval by the Federal Facility
		change current land uses in ways that could create new	Agreement (FFA) signatories will address, are matters
		preferential pathways for vapor intrusion. Please add	that are not pertinent to how the requirements and
		language that acknowledges that the Five Year Review	notifications for hazardous substances, petroleum
		process will consider any updates in regulatory guidance,	products, and other regulated materials have been
		and the Risk Management Plan and work plans for future	satisfied by the Navy as conditions prerequisite to
		construction submitted for approval by FFA signatories	transfer and, therefore are not necessary for purposes
		will address the potential for new construction to create	of the FOST. Therefore, the text of the FOST has not
		new conduits for vapor intrusion.	been revised as requested.

Comment Number	Section/ Page	Comment	Response to Comment
4.	Page 4, Section 3.1.1 IR Site 6	The 6th sentence states, "However, results from soil gas samples collected above the plume in 2010 did not indicate concentrations that would pose an unacceptable risk to potential future residential receptors via vapor intrusion." Please revise this paragraph to acknowledge that this conclusion is based on current site conditions, and the Risk Management Plan will address the potential for new construction to create new conduits for vapor intrusion.	The Navy acknowledges that a Risk Management Plan that is utilized as a mechanism to implement land use controls will address the potential for new construction to create new conduits for vapor intrusion. However, the purpose of the FOST is to summarize how the requirements and notifications for hazardous substances, petroleum products, and other regulated materials have been satisfied in order to support a determination that the property is suitable for transfer. Representations regarding what a Risk Management Plan will address are not pertinent to how the requirements and notifications for hazardous substances, petroleum products, and other regulated materials have been satisfied by the Navy as conditions prerequisite to transfer and, therefore are not necessary for purposes of the FOST. Therefore, the text of the FOST has not been revised as requested.

Comment Number	Section/ Page	Comment	Response to Comment
5.	Page 6, Section 3.5 Asbestos Containing Material, First Paragraph	The last three sentences state, "The survey reported six locations in Building 819 with assumed ACM, two of which were then sampled and found to contain damaged nonfriable ACM (Tetra Tech Inc. 1993). One sample was collected from one of the two locations with assumed damaged nonfriable ACM. Asbestos was not detected in the sample." This language is confusing. Does this mean that two of the six samples were suspected (not "found") to contain damaged nonfriable asbestos and then later this suspicion was not confirmed? Or did it mean the Navy removed the asbestos and later confirmed it was gone? Please clarify the meaning.	The text has been simplified to remove unnecessary detail as follows.  "The survey reported six locations in Building 819 with assumed ACM, two of which were then sampled and found to contained damaged nonfriable ACM (Tetra Tech Inc. 1993). One sample was collected from one of the two locations with assumed damaged nonfriable ACM. Asbestos was not detected in the sample."
6.	Page 6, Section 3.5 Asbestos Containing Material, Second Paragraph	The paragraph states, "Nonfriable ACM was identified in Building 823 during the EBS surveys (Tetra Tech EM Inc. 1998). The basewide EBS did not identify a change in ACM conditions in Building 819 as reported in the 1993 survey." EPA suggests that the relevant information could be conveyed more clearly through revision, e.g. to explain that the basewide EBS confirmed that Building 819 still contains one location with confirmed damaged nonfriable asbestos.	The text has been expanded as follows.  "The basewide EBS did not identify a change in ACM conditions in Building 819 as reported in the 1993 survey. It is assumed that Building 819 also contains nonfriable ACM."
7a.	Page 7, Section 3.7, Polychlorinated Biphenyls, Second Paragraph	The last sentence states, "The evaluation of the area around the transformer did not indicate the need for any further investigation." Please include a citation to the relevant document and consider providing additional explanation.	A citation has been added.

Comment Number	Section/ Page	Comment	Response to Comment
7b.	Page 9, Section 4.2, Soil Gas, Parcels E and UC-3	The second sentence states, "This plume is more than 400 feet from the western end of the Property, and it is unlikely that soil gas related to this plume would affect the Property." Does this statement refer to the IR-04 plume? Is the plume under building 406 closer? Please clarify.	This statement refers to the IR-04 VOC plume as shown on Figure 8 of the Parcel E ROD. The Building 406 VOC plume is about 700 feet south and is not closer. The report was not changed as a result of this comment.
7c.	Page 10, Section 4.2, Soil Gas, Parcels G	The last two sentences state, "However, concentrations posed risk only slightly above the unacceptable level (risks ranged from 1.6 x 10 <sup>-6</sup> to 2.1 x 10 <sup>-6</sup> ) and the associated sample locations were more than 50 feet from the Property boundary. Therefore, it is unlikely that soil gas migration from Parcel G would affect the Property." However, soil gas can migrate farther than 50 feet. Please provide further explanation for this conclusion.	Although soil gas can migrate farther than 50 feet, the chemical of concern — benzene — readily biodegrades in the aerobic conditions in the unsaturated zone (Abreu and Schuver 2012, EPA 2011, Hers and Truesdale 2013). Furthermore, the portion of Parcel UC-1 adjacent to the observed benzene concentrations is part of the ARIC for VOC vapors at the Property. The text has been expanded as follows.
			"However, concentrations posed from the Property boundary. Benzene readily biodegrades in the aerobic conditions in the unsaturated zone (Abreu and Schuver 2012, EPA 2011, Hers and Truesdale 2013). Therefore, it is unlikely that soil gas migration from Parcel G would affect the Property. Furthermore, the portion of Parcel UC-1 adjacent to the observed benzene concentrations is part of the ARIC for VOC vapors at the Property."

Comment Number	Section/ Page	Comment	Response to Comment
Responses t	o Comments from	California Department of Toxic Substances Control (Rya	an Miya, dated June 4, 2013)
Specific Con	nment		
la.	Section 3.1, CERCLA, Paragraph 6	Please provide an estimate of the total number of soil samples collected and analyzed in both parcels associated with the radiological removals.	The text of Section 3.1 has been expanded as follows.
			"A total of 2,631 soil samples were collected to support the radiological removals."
1b.	Section 3.1, CERCLA, Last Paragraph	Please provide an estimate of the total volume of soil removed from the parcels as a component of all historical remediation implemented (radiological removals as well as cover installation).	The text of Section 3.1 has been expanded (two locations) to include the following.  "Approximately 876 cubic yards of soil did not meet radiological release criteria and was disposed of off site as low-level radioactive waste (LLRW) (Tetra Tech EC, Inc. 2011)."  "Approximately 8,371 tons of nonhazardous waste, including 8,147 tons of soil and 224 tons of vegetation, was removed and disposed of off site during construction of the covers."

Comment Number	Section/ Page	Comment	Response to Comment
2.	Section 3.1.1 – IR Site 6	Please specify that there are currently no buildings or enclosed structures within the VOC ARIC area associated with IR Site 6.	The ARICs for VOC vapors as currently envisioned do not include any portion of IR Site 6. The text of Section 3.1 has been expanded as follows.  "There are currently no buildings or enclosed structures within the VOC ARICs associated with

Comment Number	Section/ Page	Comment	Response to Comment
3.	Section 3.6 – Lead-Based Paint (LBP), Paragraph 1	Please clarify why the Navy obligations are limited only to areas where residential use is planned. The response to DTSC's original comment #3 on the Draft FOST regarding this matter does not explain why only residential reuse areas are specified in the text.	Department of Defense (DoD) policy (DoD 1994) on lead-based paint (LBP) follows the requirements of the Residential Lead-Based Paint Hazard Reduction Act of 1992 (Title X of Public Law 102-550) concerning the transfer of federal property for residential use. These requirements are applicable to target housing which is housing constructed prior to 1978 (with some limited exceptions). Residential use was the focus of P.L. 102-550 based on findings that lead in LBP posed a significant health risk to children, especially children younger than age 6.  Non-residential areas are addressed by the following proposed FOST language: "If buildings, structures, or facilities that contain, or are presumed to contain, LBP are to be demolished, they must be demolished in accordance with applicable local, state and federal requirements."  The proposed LBP covenant language in Section 7.0 of the FOST also addresses both residential and non-residential areas.  Section 3.6 has been expanded as follows.  [response continues below]
			[response continues below]

Comment Number	Section/ Page	Comment	Response to Comment
3. (Con't)	Section 3.6 – Lead-Based Paint (LBP), Paragraph 1	[comment included above; continuation of response]	"Demolition of non-residential buildings and structures constructed prior to 1978 creates the possibility of lead being found in the soil as a result of such activities. With respect to any such nonresidential buildings and structures which the Transferee intends to demolish and redevelop for residential use after transfer, the Transferee may, under applicable law or regulation, be required by DTSC or other regulatory agencies to evaluate the soil adjacent to such non-residential buildings and structures for soil-lead hazards, and to abate any such hazards that may be present after demolition of such non-residential buildings and structures, and prior to occupancy of any newly constructed residential buildings."
4a.	Section 6.0 – Restrictions	CERCLA Institutional Controls subsection. Please note that any modifications to the ARIC for VOC vapors at the Property (primarily in Parcel UC-1) will need to be reflected in an updated Figure 5 if any soil gas samples are collected and analyzed prior to FOST execution.	Figure 5 has been revised to show the ARICs for VOC vapors as currently envisioned based on the results of the soil gas surveys.

Comment Number	Section/ Page	Comment	Response to Comment
4b.	Section 6.0 – Restrictions, Page 10, Last Bullet Item	The California EPA's most recent Advisory for Active Soil Gas Investigation was finalized in April 2012. In addition, the Final Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air was finalized in October 2011. Please update the references in this section as well as in Section 9.0 accordingly.	The text of Section 6.0 has been revised to include the updated October 2011 reference. The reference for active soil gas investigations was not used in the FOST and has not been added.
Responses t	o Additional Comr	ment from California Department of Toxic Substances Co	ntrol (Ryan Miya, dated June 24, 2014)
1.		DTSC has reviewed the Draft Final FOST and the responses that the Navy provided to our May 6, 2014 comments. All of DTSC's comments have been adequately addressed and we do not have any additional comments at this time.	Comment noted.

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# RESPONSES TO SAN FRANCISCO BAY REGIONAL WATER QUALITY CONTROL BOARD (WATER BOARD) COMMENTS ON THE REVISED DRAFT FINDING OF SUITABILITY TO TRANSFER (FOST) FOR PARCELS UC-1 AND UC-2, HUNTERS POINT NAVAL SHIPYARD, SAN FRANCISCO, CALIFORNIA, DATED MAY 6, 2013

Comment Number	Section/Page	Comment	Response to Comment
Responses	to Comments from S	an Francisco Regional Water Quality C	ontrol Board (Ross Steenson, dated June 4, 2013)
Specific Co	mments		
la.	Section 3.1.1, IR Site 6, Page 3 and Figure 5	Parcel UC-1 – Provide clarification regarding the timing of a soil vapor survey for Parcel UC-1 and Vapor Intrusion ARIC determination relative to the finalization of the FOST. The July 24, 2009 Final Record of Decision for Parcels D-1 and UC-1 states (p. 46) that soil vapor surveys will be conducted for several purposes, including identification of the Vapor Intrusion ARIC. Since a soil vapor survey has not been performed for Parcel UC-1, moving forward with the FOST appears premature.	The Navy completed a soil vapor investigation at Parcel UC-1 in October 2013 (ERRG 2014). The FOST has been revised to incorporate the results of this investigation.

# RESPONSES TO SAN FRANCISCO BAY REGIONAL WATER QUALITY CONTROL BOARD (WATER BOARD) COMMENTS ON REVISED DRAFT FINDING OF SUITABILITY TO TRANSFER (FOST) FOR PARCELS UC-1 AND UC-2, HUNTERS POINT NAVAL SHIPYARD, SAN FRANCISCO, CALIFORNIA, DATED MAY 6, 2013 (CONTINUED)

Comment Number	Section/Page	Comment	Response to Comment
1b.	Section 3.1.1, IR Site 6, Page 3 and Figure 5	Parcel UC-2 – Revise the Vapor Intrusion ARIC for Parcel UC-2 to reflect the findings (Figure 8-5) in the March 2013 Final Technical Memorandum – Soil Vapor Investigation in Support of Vapor Intrusion Assessment, Parcels B, D-1, G, and UC-2. The Vapor Intrusion ARIC in the northeast portion of the parcel, as show on Figure 5, is no longer necessary. A Vapor Intrusion ARIC is necessary for the southeast portion of Parcel UC-2.	Figure 5 has been revised to show the ARICs for VOC vapors as currently envisioned based on the results of the soil gas surveys.
2.	Section 6.0, Restrictions, Page 10, 5 <sup>th</sup> Sentence, 3 <sup>rd</sup> Bullet of Section	The cited February 2005 DTSC guidance has been superseded. The two DTSC guidance documents that should be cited include: (1) the October 2011 Final Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air; and (2) the October 2011 Final Vapor Intrusion Mitigation Advisory, Revision 1.	The text of Section 6.0 has been revised to include the updated references.

RESPONSES TO SAN FRANCISCO BAY REGIONAL WATER QUALITY CONTROL BOARD (WATER BOARD) COMMENTS ON REVISED DRAFT FINDING OF SUITABILITY TO TRANSFER (FOST) FOR PARCELS UC-1 AND UC-2, HUNTERS POINT NAVAL SHIPYARD, SAN FRANCISCO, CALIFORNIA, DATED MAY 6, 2013 (CONTINUED)

Comment Number	Section/Page	Comment	Response to Comment
Responses	to Additional Comme	ents from San Francisco Regional Wate	er Quality Control Board (Nathan King, dated July 10, 2014)
1.		Please proceed with the Draft Final UC-1/2 FOST. As we discussed, the Regional Board concerns are addressed already by the EPA comments with respect to the forthcoming Navy technical memorandum addressing the revised VOC ARIC boundary.	Comment noted.

Comment Number	Section/Page	Comment	Response to Comment			
Responses	Responses to Comments from City and County of San Francisco (Amy Brownell, dated June 4, 2013)					
Specific Co	mments					
1.	Section 3.1, IR Site 6, 4 <sup>th</sup> and 6 <sup>th</sup> Sentences	These sentences are referring to the concept of groundwater remedial goals and vapor intrusion risk as designated in the ROD. However, as stated in Note "e" of Table 4 on Page 28 of the Parcel UC-2 ROD dated December 17, 2009:  "Remediation goals for volatile organic compounds to address exposure via indoor inhalation of vapors may be superseded based on chemicals of concern identification information from future soil gas surveys. These future action levels would be established for soil gas, would account for vapors from both soil and groundwater, and would be calculated based on a cumulative risk level of 10-6 using the accepted methodology for risk assessments at the HPS."  The soil gas surveys and action levels have been completed and were documented in Figure 8-5 the TIER 2 HHRA RESIDENTIAL EXPOSURE CANCER RISK ESTIMATES FROM VAPOR INTRUSION EVALUATION OF VOCs PARCEL UC-2 from the FINAL TECHNICAL MEMORANDUM SOIL VAPOR INVESTIGATION IN SUPPORT OF VAPOR INTRUSION ASSESSMENT PARCELS B, D-1, G and UC-2 dated March 2013 which shows that the area where IR06MW54F and IR06MW55F [comment continues below]	The text of Section 3.1.1 has been modified as follows. "The ROD for Parcel UC-2 selected monitored natural attenuation as the remedy for the low concentrations of VOCs in groundwater. The groundwater samples that detected these VOCs indicated low levels (less than 10 micrograms per liter [µg/L]); but these levels exceeded the remediation goals for groundwater based on potential exposure via vapor intrusion into indoor air. Groundwater monitoring to confirm natural attenuation continues at two wells (IR06MW54F and IR06MW55F) at IR Site 6. Restrictions applied within an ARIC for VOC vapors at Parcel UC-2 address the potential vapor intrusion risk from this plume while remediation is in progress (Figure 5). However, results from soil gas samples collected above the plume in 2010 did not indicate concentrations that would pose an unacceptable risk to potential future residential receptors via vapor intrusion. Results from this survey have been used to revise the extent of the ARICs for VOC vapors through review and approval by the FFA signatories of a memorandum from the Navy BEC to the administrative record file addressing the revised VOC ARIC boundary as a non-significant change to the remedy selected in the ROD. Figure 5 shows the ARICs for VOC vapors as currently envisioned based on the results of the soil gas survey."			

Comment Number	Section/Page	Comment	Response to Comment
1. (Con't)	Section 3.1, IR Site 6, 4 <sup>th</sup> and 6 <sup>th</sup> Sentences	are located is not an ARIC for VOC vapors based on soil vapor sampling and vapor intrusion assessment results.	Response included above.
		Therefore, the ROD groundwater remedial goals have been superseded and no longer apply. We suggest removing the second half of the fourth sentence – end the sentence after the parenthetical phrase. We also suggest removing the sixth sentence including the reference to Figure 5. Please clarify and also see comment 5 below.	

Comment Number	Section/Page	Comment	Response to Comment
2.	Section 3.5, Asbestos- Containing Material, 3rd Paragraph, 1 <sup>st</sup> and 2nd sentences	"ACM that is not in compliance with applicable laws, regulations, and standards, or that poses a threat to human health at the time of transfer of the property, shall be remedied by the transferee. The remediation discussed above will not be required when the building is scheduled for demolition by the transferee; the transfer document prohibits occupation of the buildings before demolition; and the transferee assumes responsibility for management of any ACM in accordance with applicable laws."  As we mentioned in our comments on the Parcel D-2 FOST (that were successfully resolved by the Navy), we were not previously aware that the Navy will transfer property knowing that at the time of transfer the property contains ACM that is not in compliance with applicable laws or poses a threat to health. It has been our understanding that the Navy would remediate all known friable, accessible ACM or would secure the property so that at the time of transfer, the condition of the ACM at the time of transfer is compliant with law and does not pose an immediate threat to health.  [comment continues below]	This language is based on the final paragraph of DoD's BRAC asbestos policy dated October 31, 1994. Also refer to the response to EPA specific comment 5. The report was not changed as a result of this comment.

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Comment Number	Section/Page	Comment	Response to Comment
2. (Con't)	Section 3.5, Asbestos- Containing Material, 3rd Paragraph, 1 <sup>st</sup> and 2nd sentences	The discussion preceding these two sentences concerns ACM in Buildings 819 and 823, but the two cited sentences do not mention these buildings and do not clearly indicate what the noncompliant condition that requires remediation is.  We would suggest deleting these sentences as they are unnecessary and confusing. If the Navy believes that a friable ACM condition exists in either of these buildings, we suggest that the Navy instead state: (1) where the friable ACM is located, (2) that the Navy has secured the building so at the time of transfer the building does not pose a health threat.	Response included above.
		If you wish to make a more specific statement about the transferee's post-transfer obligations in this section, we suggest that you state that unless the transferee demolishes the building, remediation in accordance with applicable ACM laws and regulations is required prior to occupancy. However, your statements in Section 5.0 Notifications, in our opinion, adequately address this issue.	

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Comment Number	Section/Page	Comment	Response to Comment
3.	Section 4.0 – Adjacent Parcels, 2 <sup>nd</sup> Paragraph	We appreciate the change the Navy made to the FOST in response to the City and Lennar Comment Number 13. We believe that including a portion of the second paragraph of the response to comment number 13 as presented below would strengthen the document. Can you add these sentences?  "The Navy maintains active dust control measures for all radiologically impacted areas at HPNS, including those adjacent to Parcels UC-1 and UC-2. The basewide radiological contractor periodically measures the dose rate at the perimeter of all radiologically impacted areas and these measurements indicate no migration of radiological materials. Likewise, basewide monitoring for dust does not indicate radioactive contamination in the dust."	Section 4.0 has been expanded to include the suggested text.

Number	Section/Page	Comment	Response to Comment
4.	Section 5.4 – Pesticides	As we have written in comments on previous Navy FOSTs, we disagree with the Navy's position on pesticides. We are including our opinion here for the benefit of readers who might not be familiar with this issue. Unless the Navy is willing to reconsider its position on this issue, we understand that we will remain in an "agree to disagree" position on this issue.	The Navy's position on the responsibility for legally applied pesticides remains unchanged. The report was not changed as a result of this comment.
		We disagree with the language that the Navy has included in Section 5.4 that reads: "The Navy knows of no use of any registered pesticide in a manner inconsistent with its labeling and believes that all applications were made in accordance with the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) (7 U.S.C. § 136, et seq.), its implementing regulations, and according to the labeling provided with such substances. It is the Navy's position that it shall have no obligation under the covenants provided pursuant to § 120(h)(3)(A)(ii) of CERCLA, 42 U.S.C. §9620(h)(3)(A)(iii), for the remediation of legally applied pesticides."  [comment continues below]	

Comment Number	Section/Page	Comment	Response to Comment
4. (Con't)	Section 5.4 – Pesticides	While we acknowledge that CERCLA provides a defense to the Navy for legally applied pesticides, the burden is on the Navy to establish that it has applied pesticides in a legal manner. The above statement does not establish that the Navy has evidence that is has applied pesticides appropriately, which is the only relevant consideration.  We agree and support the USEPA's statements that the EPA has included in previous concurrence letters on FOSTs for other parcels that the Navy should be held responsible if pesticides are found above the CERCLA action levels. We encourage the USEPA to include the same statement in their concurrence letter on the FOST.	Response included above.

Comment Number Section/Pag	e Comment	Response to Comment
5. Section 6.0 Restrictions ARIC for VO Vapors and Figure 5	VOCs and refers to Figure 5 (see comments below pertaining to problems with Figure 5). On	"Construction of enclosed structures. Risk to human health may exist from potential intrusion of VOC vapors into structures built at portions of the Property. Consequently, these areas are included in the ARICs for VOC vapors (see Figure 5). Prior to construction of any new enclosed structure within a VOC ARIC, the Owner shall obtain approval from the FFA signatories of the vapor mitigation engineering controls or design alternatives to be incorporated in that structure. A reduction in potential risk can be achieved through engineering controls or other design alternatives that meet the specifications that will be set forth in the remedial action work plan. The specifications will include, but will not be limited to, DTSC's "Final Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air, Interim Final" and "Final Vapor Intrusion Mitigation Advisory, Revision 1," both dated October 2011 (DTSC 2011b, 2011c) December 15, 2004, and revised on February 7, 2005.  [response continues below]

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Comment Number	Section/Page	Comment	Response to Comment
5. (Con't)		Alternatively, the ARIC for VOC vapors may be modified by the FFA signatories as the soil and groundwater contamination areas that are producing unacceptable vapor inhalation risks are reduced over time or in response to further soil, vapor, and groundwater sampling and analysis for VOCs that establishes that areas now included in the ARIC for VOC vapors do not pose an unacceptable potential exposure risk due to VOC vapors. Enclosed structures within the ARIC for VOC vapors shall not be occupied until the Owner has requested and obtained FFA signatory approval (through approval of a RACR or similar document) that any necessary engineering controls or design alternatives have been properly constructed and are operating successfully."	Prior to occupation of enclosed structures with a VOC ARIC, the Owner shall obtain FFA signatory approval that any necessary engineering controls or design alternatives have been properly constructed and are operating successfully."

Comment Number	Section/Page	Comment	Response to Comment
6.	UC-1, Soil Vapor and Figure 5	The Parcel UC-1 ROD lists the following actions (page 46 of the ROD) that have not been implemented on Parcel UC-1. Please address this issue and document in the appropriate location (FOST, RACR, ?):	The Navy completed a soil vapor investigation at Parcel UC-1 in October 2013 (ERRG 2014). The FOST has been revised to incorporate the results of this investigation. Figure 5 has been revised to show the ARICs for VOC vapors as currently envisioned
		Soil vapor surveys will be conducted for the following purposes:	based on the results of the soil gas survey.
		• To evaluate potential vapor intrusion risks,	
		• To identify COCs for which risk-based numeric action levels for VOCs in soil gas would be established (based on a cumulative risk of 10-6),	
		• To identify where the initial areas requiring institutional controls (ARIC) for VOCs would be retained and where they would be released, and	
		• To evaluate the need for additional remedial action in order to remove ARICs.	
		Assuming that this work is completed prior to finalization of the FOST, please revise Figure 5 to incorporate the results of the soil vapor survey and (presumably) reduce the size of the VOC ARIC on Parcel UC-1 rather than showing the entire UC-1 parcel with yellow hatching.	

Comment Number	Section/Page	Comment	Response to Comment
7.	Figure 5 and UC-2	We are confused by the designation of the ARIC for VOC vapors illustrated on Figure 5 in UC-2. It is significantly different than the configuration illustrated in the Figure 8-5 TIER 2 HHRA RESIDENTIAL EXPOSURE CANCER RISK ESTIMATES FROM VAPOR INTRUSION EVALUATION OF VOCs PARCEL UC-2 from the FINAL TECHNICAL MEMORANDUM SOIL VAPOR INVESTIGATION IN SUPPORT OF VAPOR INTRUSION ASSESSMENT PARCELS B, D-1, G and UC-2 dated March 2013. Isn't Figure 5 supposed to match this Figure 8-5 and show only the one acre grid in the southwest corner of UC-2 as being covered by the ARIC for VOC vapors? In what document is this designated yellow hatched area along the northeast edge of UC-2 defined? We believe that only the area shown in Figure 8-5 is the designated ARIC for VOC vapors because the ROD groundwater remedial goals related to vapor intrusion risk have been superseded by this March 2013 document (see comment 1 above).	Please see the response to city comment 1 above. Figure 5 has been revised to show the ARICs for VOC vapors as currently envisioned based on the results of the soil gas surveys.

Comment Number	Section/Page	Comment	Response to Comment
Responses	to Additional Co	mments from City and County of San Francisco	(Amy Brownell, dated June 25, 2014)
1.	EPA Comment #5 and SFDPH Comment #2	These two comment/responses pertain to the language in Section 3.5 Asbestos-Containing Materials. In addition to other statements these responses include the statement "The report was not changed as a result of this comment". However, the language in the redline was changed. Please review comment #5 below that contains suggested further revisions and then revise the response accordingly.	Refer to the response to comment 5 below. The statement that the report was not changed was an inadvertent error.
2.	Section 2.0, Property Description, page 1	The next to last sentence is a bit confusing. We suggest revising it to state: "There are no buildings on Parcel UC-2 except for a small, unused security guard station located in Robinson Street."	The text has been revised as requested.
3.		Navy notes that there was no comment 3.	No response necessary.
4.	Section 3.1.1, IR Site 6, fourth sentence, page 4	The sentence is awkward. We suggest revising it to state: "The UC-2 groundwater samples contained less than 10 micrograms per liter (µg/L) VOCs. These levels exceeded the vapor intrusion remediation goals for potential exposure via indoor air."	The text has been revised as follows.  "The gGroundwater samples collected from Parcel UC-2 contained VOCs at concentrations that detected these VOCs indicated low levels (less than 10 micrograms per liter (µg/L). †These levels exceeded the vapor intrusion remediation goals for groundwater based on potential exposure via vapor intrusion into indoor air."

Comment Number	Section/Page	Comment	Response to Comment
5.	Section 3.5, Asbestos- Containing Material, third paragraph, page 6	Thank you for deleting some of the sentences and replacing with new wording. We request that the last sentence be modified to match language that is presented later in this FOST under the Covenants section.  "Remediation of ACM by the Navy is not required in or on buildings, structures, facilities, and utilities that may be scheduled for demolition by the Transferee where the transfer document prohibits occupation of the buildings <u>until the ACM is abated or the building is demolished before demolition</u> ; and <u>where the Transferee assumes responsibility for management of any ACM in accordance with applicable laws."</u>	"Remediation of ACM by the Navy is not required in or on buildings, structures, facilities, and utilities that may be scheduled for demolition by the Transferee where (1) the transfer document prohibits occupation of the buildings until the ACM is abated or the building is demolished before demolition; and (2) the Transferee assumes responsibility for management of any ACM in accordance with applicable laws."
6.	Section 4.1, Groundwater, Parcel C, 2nd paragraphs, page 8	Please consider revising the paragraph to state: "IR Site 6 is north of and continues into the Property (Figure 4). As discussed in Section 3.1.1, results from soil gas samples collected above a plume in this area in 2010 did not indicate concentrations that would pose an unacceptable risk to potential future residential receptors via vapor intrusion. Figure 5 shows the ARIC for VOC vapors as currently envisioned based on the 2010 soil gas survey."	The text has been revised as requested.

Comment Number	Section/Page	Comment	Response to Comment
7.	Section 6.0 Restrictions, second sentence, page 11	Please consider adding a reference to Figure 5 after the word "restrictions."	A reference to Figure 5 has been added at the end of the paragraph titled "CERCLA Institutional Controls."

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Comment Number	Section/Page	Comment	Response to Comment
8.	Section 6.0 Restrictions	Please consider revising the wording as suggested below in order to bring the FOST wording in alignment with the wording that has been proposed for the model CRUP. The intent of the proposed wording is to clarify what is required for the restriction – it does not change the restriction.  First bullet, page 13: Please revise to read "Removal of or damage to security features of a CERCLA remedy or monitoring device (for example, locks on monitoring wells, survey monuments, fencing, signs, or monitoring equipment and associated pipelines and appurtenances).	The text of the bullet concerning removal or damage to security features has been revised as requested.  Please see the response to city comment 5 from June 4, 2013 for the revised restriction on construction of enclosed structures.
		Construction of Enclosed Structures. Please replace all the wording starting with the sentence "Alternatively, the ARIC" with "Prior to construction of any new enclosed structure within the ARIC for VOC vapors, the Owner shall obtain approval from the FFA Signatories of the vapor mitigation engineering controls or design alternatives to be incorporated in that structure.  [comment continues below]	

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Comment Number	Section/Page	Comment	Response to Comment
8 (con't)	Section 6.0 Restrictions	Prior to occupation of enclosed structures within the VOC ARIC, the Owner shall obtain FFA signatory approval that any necessary engineering controls or design alternatives have been properly constructed and are operating successfully.	[continuation of comment; see response above]
		As the VOC vapor contamination areas that are producing unacceptable vapor inhalation risks are reduced over time, or in response to further soil, vapor, and groundwater sampling and analysis for VOCs that establishes that areas now included in the VOC ARIC do not pose an unacceptable potential exposure risk due to VOC vapors, the FFA signatories may modify the VOC ARIC. Any Owner or Owners may apply to the FFA Signatories for a modification of the VOC ARIC. Such application shall involve submission of a soil gas sampling work plan for review and approval by the FFA Signatories."	

#### REFERENCES

- Abreu, L. and H. Schuver. 2012. Conceptual Model Scenarios for the Vapor Intrusion Pathway. EPA 530-R-10-003. Available on line at http://www.clu-in.org/issues/default.focus/sec/Vapor\_Intrusion/cat/Policy\_and\_Guidance/
- Department of Defense (DoD). 1994. Asbestos, Lead-Based Paint (LBP), and Radon Policies at Base Realignment and Closure Cleanup (BRAC) Properties. October 31.
- Department of the Navy. 2014. Non-significant (Minor) Changes to the Selected Remedies Presented in the Records of Decision for Parcels B, D-1, G, UC-1, and UC-2, Hunters Point Naval Shipyard, San Francisco, California. September 15.
- Department of Toxic Substances Control (DTSC). 2011a. Final Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air. October.
- DTSC. 2011b. Final Vapor Intrusion Mitigation Advisory, Revision 1. October
- Engineering/Remediation Resources Group, Inc. 2013a. Final Remedial Action Completion Report for Parcels UC-1 and UC-2, Hunters Point Naval Shipyard, San Francisco, California. February 25.
- ERRG. 2013b. Final Operation and Maintenance Plan, Parcels UC-1 and UC-2, Hunters Point Naval Shipyard, San Francisco, California. April 19.
- ERRG. 2014. Draft Technical Memorandum Soil Vapor Investigation in Support of Vapor Intrusion Assessment at Parcel UC-1, Hunters Point Naval Shipyard, San Francisco, California. April.
- Hers, I. and R.S. Truesdale. 2013. Evaluation of Empirical Data to Support Soil Vapor Intrusion Screening Criteria for Petroleum Hydrocarbon Compounds. EPA 510-R-13-001. Available on line at http://www.epa.gov/oust/cat/pvi/PVI Database Report.pdf
- Sealaska Environmental Services. 2013. Final Technical Memorandum, Soil Vapor Investigation in Support of Vapor Intrusion Assessment, Parcels B, D-1, G, and UC-2, Hunters Point Naval Shipyard, San Francisco, California. March.
- U.S. Environmental Protection Agency (EPA). 2011. Petroleum Hydrocarbons and Chlorinated Hydrocarbons Differ in Their Potential for Vapor Intrusion. Office of Underground Storage Tanks. Available on line at <a href="http://www.clu-in.org/download/contaminantfocus/vi/Petroleum">http://www.clu-in.org/download/contaminantfocus/vi/Petroleum</a> and Chlorinated Hydrocarbons.pdf

The table below contains the responses to comments received from the regulatory agencies on the "Draft Finding of Suitability to Transfer for Parcels UC-1 and UC-2, Hunters Point Naval Shipyard, San Francisco, California," dated February 11, 2011. The comments addressed below were received from the U.S. Environmental Protection Agency (EPA), the California Department of Toxic Substances Control (DTSC), the San Francisco Bay Regional Water Quality Control Board (Water Board), and the City and County of San Francisco Department of Public Health (city). Throughout this table, *italicized* text represents additions to the document and strikeout text indicates deletions. Also throughout this table, references to page, section, table, and figure numbers pertain to the new document unless otherwise indicated.

Comment Number	Section/ Page	Comment	Response to Comment
Responses t	to Comments from	m U.S. Environmental Protection Agency (Mark Ripper	da, dated March 29, 2011)
General Con	nment		
1.		(a) The FOST is drafted as if the remedial action is complete, however there is no description of the cover having been installed.	(a) The finding of suitability to transfer (FOST) has been updated with current status and completion of the remedial actions. The remedial action for soil (covers) was implemented between May and
		(b) Is the GW within this parcel adequately addressed by the ICs, if so please explain.	September 2012. The final remedial action completion report (RACR) was submitted in February 2013 (Engineering/Remediation Resources Group, Inc. [ERRG] 2013).
			(b) Groundwater is expected to naturally attenuate and institutional controls (IC) placed on the property will control future land use. The remedy will restrict the transferee from extraction of groundwater and installation of new groundwater wells without prior
			written approval from the Federal Facility Agreement (FFA) signatories.

Comment Number	Section/ Page	Comment	Response to Comment
2.		Will there be a Risk Management Plan for these parcels? If so when will they be developed/approved?	The record of decision (ROD) does not require that the Navy prepare a Risk Management Plan (RMP), and it is not a requirement to support the Navy's FOST. It is unknown at this time if an RMP will be prepared by the City.
Specific Cor	│ nments		
1.	Section 3.1.8, PCBs	Why is 5 ppm considered clean for PCBs? That's probably in the oil, not in the environment, so do you have any data or conclusions from the report on what conditions are at the former transformer location?	The concentration of 5 parts per million (ppm) is not intended to imply a "clean" condition. The concentration of 5 ppm was selected as a benchmark in the environmental baseline survey (EBS) report (Tetra Tech EM Inc. 1998) to subdivide discussions related to polychlorinated biphenyls (PCB). The concentration applies only to the oil in transformers and other electrical equipment. The concentration of 5 ppm corresponds to a State of California threshold for disposal of transformer fluids. The text has been revised as follows for clarity.  "Based on the results of the basewide <i>PCB</i> programs conducted at HPNS, no PCB sites or transformers with PCB concentrations of 5 parts per million (ppm) or more exist on Parcels UC-1 or UC-2. The concentration of 5 ppm was used as a benchmark in the EBS report to represent a threshold for disposal of transformer fluids based on California regulations. The 5 ppm concentration applies only to liquids within a transformer or electrical equipment."  The second paragraph of this section describes the environmental conditions related to PCBs. This text has been expanded to state that evaluation of the area around the transformer did not indicate the need for any further investigation.

Comment Number	Section/ Page	Comment	Response to Comment
2.	Section 3.2	a) The second paragraph about groundwater contamination and treatment in Parcel G and the effects of that contamination on Parcel UC-1 is unclear. It says that: "The treatability study to address the chemicals in groundwater has been completed, with remediation goals achieved in most areas. The treatability study confirmed that Parcel UC-1 has not been affected by hazardous substances". But the text then goes on to say that	<ul> <li>a) Parcel UC-1 is upgradient from areas with groundwater contamination. The cited sentence "Restrictions being applied to Parcel UC-1are discussed in Section 3.4." has been deleted.</li> <li>b) The text of Section 3.1.1 has been expanded as follows to more clearly describe groundwater at Parcel UC-2.</li> </ul>
		restrictions are being applied to Parcel UC-1 related to groundwater contamination and that the restrictions are discussed in Section 3.4. However, Section 3.4 discusses the legal mechanisms of the restrictions and doesn't provide any additional detail on the contamination or reasons for the restrictions.	"A small groundwater plume containing carbon tetrachloride and chloroform exists at Parcel UC-2 (wells IR06MW54F and IR06MW55F) and does not have an identified source. Except for this small plume, Parcel UC-2 is upgradient of other areas of groundwater contamination at HPNS. The ROD for
		b) Please be more clear about whether or not there is groundwater contamination in Parcel UC-2, and if so, add specificity on the location and severity of the contamination. Right now, there is just the very general restriction shown on Figure 6 with no further discussion.	Parcel UC-2 selected monitored natural attenuation as the remedy for the low concentrations of volatile organic compounds (VOC) in groundwater at Parcel UC-2."

Comment Number	Section/ Page	Comment	Response to Comment
3.	Section 3.4, CERCLA Institutional Controls	(a) The second bullet restricts residential use site-wide, but Figure 3 shows that some portions of both UC-1 and UC-2 are planned for multi-purpose, which includes residential.	(a) The property reuse discussions have been taken out of the FOST pursuant to Navy policy on FOSTs and findings of suitability to lease (FOSL). As a result, this comment is no longer relevant to the content for incorporation.
		(b) The UC-2 ROD does not include a residential use restriction. Please clarify the language to indicate that the residential restriction applies to specific areas shown on Figure 3.	(b) Restrictions on residential reuse do not apply to Parcels UC-1 or UC-2 and, therefore, the second bullet has been deleted.
4.	Figure 6	This figure only shows a small portion of Parcel UC-1 has having Soil Vapor ARICS. However, the RODs have ARICs over the entire parcels. If the FOST goes final before we officially adjust the ARICs, the FOST should track the RODs.	The ROD for Parcels D-1 and UC-1 indicated that all of Parcel UC-1 was included in the area requiring institutional controls (ARIC) for VOC vapors. The ROD for Parcel UC-2 indicated that a designated portion of redevelopment block 10 within Parcel UC-2 was within the ARIC for VOC vapors. The ARIC for VOC vapors presented in the text and Figure 5 has been modified to match the RODs. Other restrictions (such as restrictions on land-disturbing activity) apply parcel-wide on both parcels. Figure 5 shows the locations of both the ARIC for VOC vapors and the ARIC for other restrictions.

Comment Number	Section/ Page	Comment	Response to Comment
5.	Table A-1b	The list of hazardous substances released into	The list of chemicals in Table A-1 represents all
		groundwater in Parcel UC-2 show a remedy of	chemicals detected in groundwater samples collected
		Monitored Natural Attenuation (MNA) for over 20	at Parcel UC-2. The full list is provided for
		organics and metals. However, the ROD only includes	completeness of disclosure. However, the ROD
		three organics, carbon tet, chloroform, and TCE, as being	identified remediation goals only for carbon
		addressed by MNA. Please edit the Table so that it	tetrachloride, chloroform, and trichloroethene (TCE)
		tracks the ROD. Also, the contents of this table should	because only those chemicals posed potential
		be better described in the text of FOST.	unacceptable risk to human health. The table was not
			changed as a result of this comment.

Comment Number	Section/ Page	Comment	Response to Comment
Responses t	to Comments from	California Department of Toxic Substances Control (Rya	n Miya, dated March 10, 2011)
Specific Con	nment		
1.	Section 3.0, Table 1 - Environmental Requirements and Notifications	Environmental Requirements and Notifications. The table indicates that polychlorinated biphenyls are not applicable to the property. However, the Figure 4 map indicates that a (pole mounted) transformer was previously located east of Building 823. Please clarify when the PCB transformer was removed from the property and what investigation for any potential release(s) from the transformer was conducted. This comment also applies to Section 3.1.8 – Polychlorinated Biphenyls.	The table of environmental requirements and notifications has been revised to indicate "yes" for PCBs for Parcel UC-1. The clarification of PCB remediation and removal actions has been provided in Section 3.7 as follows:  "Since the SI was completed, the Navy has removed all transformers and oil circuit breakers associated with IR Site 51 that contained PCBs at concentrations of 5 ppm or more. The only transformer at the Property was a pole-mounted transformer designated Substation I-4. The pole-mounted transformer (Substation I-4) at Building 819 was removed from the property and disposed of off site (Tetra Tech EM Inc. 1998). The evaluation of the area around the transformer did not indicate the need for any further investigation."

Comment Number Secti	ion/ Page	Comment	Response to Comment
	on 3.1.2.1 - ERCLA	Radiological concerns subsection, paragraph one. Please revise the last sentence of the paragraph to clarify that DTSC issued a letter concurring that Building 819 was suitable for unrestricted use with respect to radiological issues.	Changes have been made as requested.

Comment Number	Section/ Page	Comment	Response to Comment
3.	Section 3.3.4 – Lead-Based Paint (LBP)	Paragraph two. It is unclear why the Navy obligations are limited only to areas where residential use is planned. Investigations for potential hazards posed by lead in soil from LBP must take place to regardless of the use proposed to ensure ongoing protection of public health.	The following sentences have been added to Section 3.6 to address the comment:  "The Navy is not aware of any LBP that has been released into the environment and poses a threat to human health on the Property.  In addition, land use restrictions that will be carried forward for the entire area of the Property will ensure that any potential LBP in soil that may exist in the vicinity of the structures will remain beneath the durable cover and will not pose a human health threat."  The FOST language regarding LBP hazards in soil accurately states the Navy's position that all required actions have been taken to ensure the protection of human health.

Comment Number	Section/ Page	Comment	Response to Comment
4.	Section 3.4 – Restrictions and Covenants	(a) DTSC cannot concur with the statement that all remedial action has been taken because the Navy has not investigated for potential releases of lead to the environment from LBP. See comments 3 and 4b.	(a) The remedial action for soil is complete at the Property. The final RACR was submitted in February 2013 (ERRG 2013). Please refer to DTSC's comment #3 above for an explanation of Navy's obligation regarding soil lead hazards.
		(b) Lead-Based Paint subsection. The text should clarified to include the obligation to ensure that potential releases of lead to the environment from LBP are investigated and remediated to ensure the protection of public health and the environment since the Navy has not completed those investigations.	<ul> <li>(b) Please refer to DTSC comment #3.</li> <li>(c) The requested change has been made.</li> <li>(d) The language of this restriction was drafted in cooperation with DTSC in responding to comments on the final land use control remedial design (LUC RD) for Parcel B. The current text exists in multiple LUC RD documents and RODs. The Navy does not recommend changing the text to avoid introducing inconsistency among the existing LUC RDs and RODs.</li> </ul>
		<ul> <li>(c) Page 11, first paragraph. Please replace the term soil "cap" with soil "cover".</li> <li>(d) Page 11, second paragraph. The term "construction" in this context only pertains to remedial systems and should therefore be revised to say "construction of remedial systems".</li> <li>(e) Page 11, first bullet, last sentence. A brief update on the status of the soil vapor sample results and ARIC definition should be provided here.</li> </ul>	(e) Additional soil vapor sampling at Parcels UC-1 and UC-2 will not be completed in time for the FOST to further define the ARIC for VOC vapors. Therefore, the last sentence of this bullet has been deleted to track the ARIC information in the RODs. The Navy will "finalize" a VOC ARIC with regulatory concurrence before the property is transferred.  The Navy generally doesn't provide definitions for technical terms in the text of the FOST. It is assumed that the readers must have some prior knowledge when reading the FOST or otherwise the definitions of technical terms are provided in the referenced documents.

Comment Number	Section/ Page	Comment	Response to Comment
4. (Continued above)	Section 3.4 – Restrictions and Covenants	(f) Page 13, Monitoring Well Protection subsection (#3). The paragraph should include additional text verifying that Navy and FFA signatory authority to deny approval of projects within the ARIC shall be based on a determination that a potential project as designed may violate conditions or restrictions contained in the ICs on the property and result in a condition that is not protective of public health and the environment (not just based on the "effectiveness of ICs").	This subsection has been deleted from the FOST. Thus, the comment is no longer applicable.

# RESPONSES TO SAN FRANCISCO BAY REGIONAL WATER QUALITY CONTROL BOARD (WATER BOARD) COMMENTS ON THE DRAFT FINDING OF SUITABILITY TO TRANSFER (FOST) FOR PARCELS UC-1 AND UC-2, HUNTERS POINT NAVAL SHIPYARD, SAN FRANCISCO, CALIFORNIA, DATED FEBRUARY 11, 2011

Comment Number	Section/Page	Comment	Response to Comment
Responses	to Comments from S	an Francisco Regional Water Quality C	Control Board (Ross Steenson, dated March 9, 2011)
Specific Cor	nments		
1.	Section 3.1.2.1	Why soil samples were not collected on Parcels UC-1 and UC-2. I recommend adding a brief statement; see Section 2.5.1 of the December 22, 2010 Final Design Basis Report (part of the <i>Final Remedial Design Package</i> ) for suggested wording.	The text in Section 3.1 has been expanded to include the following: "No soil samples have been collected at the Property, except for samples collected associated with the radiological removals. Samples were not collected for other chemical constituents because, based on review of historical documents and past operations, no known sources of chemical contamination are present."

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Comment Number	Section/Page	Comment	Response to Comment
Responses	to Comments fro	om City and County of San Francisco and Lenna	r (Amy Brownell, dated March 29, 2011)
General Cor	nment		
1.		This document seems to be missing an entire section describing the implemented remedies, referencing the certificate of completion and the long term maintenance obligations as discussed in more detail in the next two comments. I'm fine with having incomplete draft documents in order to move the project forward however a placeholder heading should have been inserted to alert reviewers to a missing section that would appear in future documents. As busy as we are on this project, it is hard for us to remember which parcels are in what state of remedy implementation and the Navy should be stating that there is missing information that will be in future versions of the document.	The FOST has been updated with the current status. All remedial actions for soil at Parcels UC-1 and UC-2 are complete.

Comment Number	Section/Page	Comment	Response to Comment
2.		Please verify that the Navy plans on writing a RAWP for the UC-2 soil cover, constructing the cover and writing a RACR documenting the construction of the soil and asphalt covers and obtaining a certificate of completion from the Regulatory Agencies on the RACR and summarizing the RACR in the FOST prior to finalizing the FOST.	The final remedial action work plan (RAWP) for the UC-1/UC-2 soil cover was completed in June 2012. The Navy issued the final RACR in February 2013. A summary of the regulatory concurrence will be included in the FOST before it is finalized.
3.		A section needs to be added describing the installed durable cover remedies, required long term maintenance of the durable covers, required groundwater monitoring and long term maintenance of monitoring wells. If the Navy is passing on the obligation to maintain these remedies then they need to describe how that maintenance will be carried out.	Detailed discussion on maintenance of the remedies is not a requirement to support the FOST. However, that information is specified in the ROD and the remedial design and these documents are mentioned by reference in the FOST. The appropriate legal instruments for transferring the IC implementation responsibilities are a quitclaim deed and covenant to restrict use of property (CRUP).

Comment Number	Section/Page	Comment	Response to Comment
4.		This FOST can not be finalized until the final soil gas survey results are available and the report including the results of the related Human Health Risk Assessment (HHRA) is complete. Table 1, Sections 3.1.3, 3.2, 3.3, 3.3.2, and 3.4, and Figure 6 should be updated to more accurately and completely present the results of the soil gas investigation and related HHRA. Please verify that the FOST will remain draft until these documents are finalized.	Please refer to the responses to EPA's comment #4 and DTSC's comment #4(e). Additional soil vapor sampling at Parcels UC-1 and UC-2 will not be completed in time to modify the initial ARIC for VOC vapors. ARIC modifications will require approval from the FFA signatories and will be addressed separately from the FOST. ICs placed on the Property will address potential risk from vapor intrusion.
5.		The Institutional Controls discussion in the FOST and specifically in Section 3.4 including Compliance Reporting needs to be consistent with the processes stated in the LUC RD and the RMPs for parcels that have completed those documents (B, G, D-1, UC-1 and UC-2). Many comments below suggest reordering and rewording the CERCLA Intuitional Controls Section which starts on page 10. The annual inspection and reporting process for UC-1 and UC-2 needs to be consistent with that proposed for B and G.	The ICs discussion has been modified for consistency with the Parcel UC-1 and UC-2 RODs and LUC RDs, and is presented similar to the discussion in the Final FOST for Parcel B IR Sites 7 and 18.

Comment Number	Section/Page	Comment	Response to Comment
Specific Co	mments		
1.	Section 2.0, Property Description, first paragraph	Please add a sentence describing the reuse for Redevelopment Block 10 as it is designated with a separate pattern on Figure 3 but not explained. Or remove the pattern and callout from Figure 3 as stated below in Comment No. 19.	See response to EPA's comment #3 above.
2.	Section 2.0, 1st paragraph, fourth sentence	Please revise to "In July 2010, SFRA amended the Redevelopment Plan to include the possibility of a National Football League Stadium locating on Parcel G adjacent to Parcel UC-1. Supporting infrastructure for the stadium, which might be located on Parcels UC-1 and UC-2, is another possible future use consistent with the final RODs for Parcels UC-1 and UC-2."	Property reuse discussion has been taken out of the FOST pursuant to the Navy's FOST/FOSL policy. As a result, this comment is no longer relevant to the content for incorporation.
3.	Section 3.1.2.1 - Page 3, CERCLA, first sentence	State that the IR site is IR 6.	Requested change has been made.

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Comment Number	Section/Page	Comment	Response to Comment
4.	Section 3.1.2.1  - Page 4, Installation Restoration Sites, first paragraph	At the end of the paragraph mention that although concentrations of carbon tetrachloride and chloroform detected in groundwater exceed remediation goals for groundwater based on potential exposure via indoor air, soil gas samples collected at this location did not exceed Soil Gas Action Levels (SGALs) and an Area Requiring Institutional Controls (ARIC) related to VOC vapors will not be required.	The ARIC for VOC vapors shown in the FOST matches that designated in the RODs. ARIC modifications will require approval from the FFA signatories and will be addressed separately from the FOST.
5.	Section 3.1.2.1  - Page 4, Installation Restoration Sites, second paragraph, first and second sentences	Please add at end of first sentence "because no IR sites with potential releases to soil were identified as part of the IR Program". Please delete at the end of the second sentence "in circumstances where no data are available for an area".	The first sentence was changed as requested. However, the end of the second was revised to read:  "in areas where soil investigation is not required."

Comment Number	Section/Page	Comment	Response to Comment
6.	Section 3.1.2.1, Installation Restoration Sites, second paragraph	The wording associated with ICs fails to provide the public with a clear understanding of the remedy. The ICs (i.e., deed restrictions and restrictive covenant) are just the tools that will be used to implement certain activity restrictions. Please revise the language wherever ICs are mentioned to explain to the reader the nature and purpose of the ICs. For example the phrase "the selected soil remedies are covers and institutional controls (ICs)" could instead say "the selected soil remedies consist of durable covers and activity restrictions designed to preserve the cover remedy. The activity restrictions will be enforced through deed restrictions and a restrictive covenant between DTSC and the Navy. The groundwater remedy includes monitoring and a restriction on use of groundwater, enforced through deed restrictions and a restrictive covenant between DTSC and the Navy."	The ICs selected in the RODs for the Property are legal mechanisms in the form of land use and activity restrictions incorporated into environmental restrictive covenants to be included in one or more quitclaim deeds from the Navy to the property recipient(s) and in "Covenants to Restrict Use of Property" (CRUP) entered into by the Navy and DTSC. This is consistent with the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) and EPA and Navy policy.  The nature and purpose of those ICs are detailed in Section 6.0, Restrictions. Also, Section 3.1 has been clarified to say that the quitclaim deed and CRUP will be used to enforce and implement the land use and activity restrictions when the Property is transferred.

Comment Number	Section/Page	Comment	Response to Comment
7.	Section 3.1.2.1, Page 4, Radiological Concerns, first sentence of both first and third paragraphs	Please add this after the first sentence, "Radiologically Impacted means that, based on previous use or historic records, there was a chance that radiological concerns existed in the areas and those concerns needed to be investigated."	The following definition of "Radiologically Impacted" taken from the Historical Radiological Assessment Report has been added to the text of the FOST:  "Impacted areas are generally those with a history of radiological operations and, therefore, having the potential for residual radioactive contamination (NAVSEA 2004)."
8.	Section 3.1.2.1, Page 4, CERCLA and Radiological Concerns	Suggest adding a subsection on Spent Abrasive Material similar to Section 3.2.5 from the FOSET for Parcels B and G and then adding a paragraph at the beginning of the Radiological Concerns section that provides more background on the radiological program similar to the first paragraph from Section 3.2.6 from the draft FOSET for Parcels B and G. Additionally, information should be provided on surface level surveys for radioactive materials undertaken basewide.	Spent abrasive material has never been found in Parcels UC-1/UC-2. Thus, a subsection will not be added.  In addition, the first sentence of Section 3.1.2 has been expanded to discuss the radiological program as follows:  "In the Historical Radiological Assessment (HRA) (Naval Sea Systems Command[NAVSEA] 2004), the Navy identified potentially radiologically impacted sites throughout HPNS (including buildings, equipment, and infrastructure), including within the Property, associated with former use of general radioactive materials and decontamination of ships used during atomic weapons testing in the South Pacific."

Comment Number	Section/Page	Comment	Response to Comment
9.	Section 3.1.3 and Table 1	During the soil gas survey in 2010, methane, ethane and propane were detected which warrants mentioning in both this section and Table 1. Without the pending HHRA for soil gas it is difficult to determine the potential risk associated with these detections.	Additional soil vapor sampling at Parcels UC-1 and UC-2 will not be completed in time for the FOST to modify the initial ARIC for VOC vapors. ARIC modifications will require approval from the FFA signatories and will be implemented separately from the FOST. ICs placed on the Property will address potential risk from vapor intrusion.  EPA has not established regional screening levels for methane, ethane, or propane, and these chemicals are not incorporated into standard human health risk assessments. The low concentrations (less than 0.05 percent) of methane, ethane, and propane measured in a soil gas sample collected near the southwestern end of Parcel UC-2 during the soil vapor investigation in 2010 (Sealaska Environmental Services 2010, 2013) were concluded to represent highly diluted natural gas attributed to previously abandoned natural gas pipelines in the area. Furthermore, the concentrations did not present an explosive hazard. The text of the report was not changed as a result of this comment.

Comment Number	Section/Page	Comment	Response to Comment
10.	Section 3.1.6, Asbestos Containing Material, second paragraph, second sentence	Shouldn't "Building 819" be "Building 823"?	The text indicating Building 823 is correct as written. The EBS report did not identify ACM as an issue for Building 819. As noted in the preceding paragraph in this section, the sample collected from assumed ACM at Building 819 did not detect asbestos. The text was not changed as a result of this comment.
11.	Section 3.2, Adjacent Parcels	The soil gas concentrations detected on Parcel G and adjacent to both UC-1 and UC-2 should be described in this section as well as the conclusions reached in the HHRA to be included in the pending Soil Gas Investigation Report.	"Soil gas has the potential to migrate from adjacent parcels onto the Property. However, ICs placed on the Property will address this potential risk (see Section 6.0)."
12.	Section 3.2, Adjacent Parcels, paragraphs three and four	Please refer to Figure 4 in paragraph three and to Figure 5 in paragraph 4.	The text has been modified as requested.

Comment Number	Section/Page	Comment	Response to Comment
13.	Section/Page  Section 3.2 – Adjacent Parcels, last paragraph	Please explain why radioactive materials, not yet remediated from say Parcel C or E, do not pose a risk to Parcel UC-1 or UC-2. Further information should be provided on surface level surveys for radioactive materials undertaken basewide and other remedial actions already undertaken on adjacent parcels. The issue of the potential for exposure because of contaminants on adjacent parcels is an issue of potential community concern; a more thorough discussion is needed here to explain why, for example, uncovered areas on Parcels C and E don't pose a risk to people in Parcels UC-1 and UC-2.	The following sentences have been added to Section 4.0 to address the comment:  "There is little potential for radioactive materials in adjacent parcels to pose a risk at the Property. The only potential exposure pathway for radiological exposure would be via inhalation of windblown dust from uncovered areas. There are no uncovered areas at Parcel C that have radiological contamination; only buildings or the subsurface sanitary sewer and storm drain lines have potential radioactive contamination at Parcel C. Winds blow predominantly from the west at HPNS and the portions of Parcel E immediately upwind from the Property are either not radiologically impacted or have been surveyed and radiologically released for unrestricted use."  Furthermore, the Navy maintains active dust control measures for all radiologically impacted areas at HPNS, including those adjacent to Parcels UC-1 and UC-2. The basewide radiological contractor periodically measures the dose rate at the perimeter of all radiologically impacted areas and these measurements indicate no migration of radiological materials. Likewise, basewide monitoring for dust does not indicate radioactive contamination in the dust. Finally, all
			personnel engaged in radiological activities wear thermoluminescent dosimeter (TLD) badges to monitor for exposure to radionuclides and all TLD badge monitoring results indicate no detections.

Comment Number	Section/Page	Comment	Response to Comment
14.	Section 3.4, page 10, CERCLA Institutional Controls, first paragraph	Please change the first sentence and beginning of second sentence to read, "In accordance with RODs prepared pursuant to CERCLA for Parcels UC-1 and UC-2, activity restrictions ICs will be implemented to prevent exposure to chemicals of concern in soil gas, soil and groundwater on Parcels UC-1 and UC-2. These activity restrictions"	The suggested change would not be consistent with the language used in the RODs and, therefore, the text was not changed.  Please refer to the response of City and Lennar's comment #6 for an explanation of the nature and purpose of the ICs.
15.	Section 3.4, page 10, CERCLA Institutional Controls, second paragraph, first sentence	Please change to read, "All of Parcels UC-1 and UC-2 will be subject to activity restrictions ICs related to soil and groundwater."	The suggested change would not be consistent with the language used in the RODs and, therefore, the text was not changed.

Comment Number	Section/Page	Comment	Response to Comment
16.	Section 3.4, page 10, CERCLA Institutional Controls, second paragraph, last sentence	Please revise the last sentence to state the following: "In addition, activity restrictions ICs have been identified selected in the ROD to address potential vapor intrusion from VOCs in soil vapor and groundwater. Risk to human health may exist from potential intrusion of VOC vapors into structures built at Parcels UC-1 and UC-2 in certain areas as designated on Figure 6. Consequently, these areas are included in the ARIC for VOC vapors at Parcels UC-1 and UC-2. The ARIC was defined based on result of the site-wide soil gas survey and associated Human Health Risk Assessment (HHRA) (Sealaska 2011). If enclosed structures are to be constructed on Parcels UC-1 and/or UC-2 in the ARIC subject to potential vapor intrusion, engineering controls or other design alternatives to assure vapors are reduced to acceptable levels must be implemented and the requirement for engineering controls or other design alternatives will be enforced through a recorded deed restriction and a restrictive covenant between DTSC and the Navy."	"In addition, ICs have been selected in the RODs to address potential vapor intrusion from VOCs in soil vapor and groundwater. Risk to human health may exist from potential intrusion of VOC vapors into structures built at the Property in certain areas as designated on Figure 5. Consequently, these areas are included in the ARIC for VOC vapors at the Property. If enclosed structures are to be constructed on the Property in the ARIC subject to potential vapor intrusion, engineering controls or other design alternatives to assure vapors are reduced to acceptable levels must be implemented and the requirement for engineering controls or other design alternatives will be enforced through a recorded deed restriction and a restrictive covenant between DTSC and the Navy."

Comment Number	Section/Page	Comment	Response to Comment
17.	Section 3.4, page 10, CERCLA Institutional Controls, bullets	Please rewrite these bullets with the following introductory phrase:  The activity restrictions can be grouped into three categories: prohibited activities, activities requiring HPNS federal facility agreement (FFA) signatory approval, and activities allowed in compliance with a Risk Management Plan.  Prohibited Activities:  Insert bullet one about growing fruits and veggies and use of groundwater  Activities requiring FFA signatory approval:  Insert bullet two about residential uses  • Any land disturbing activity in an area of groundwater contamination or in an area that causes or facilitates the movement of any known contaminated groundwater.	This section has been substantially revised for consistency with the Navy's FOST/FOSL policy.

Comment Number	Section/Page	Comment	Response to Comment
17. (Continued above)	Section 3.4, page 10, CERCLA Institutional Controls, bullets	<ul> <li>Alteration, disturbance, or removal of any monitoring wells.</li> <li>Alteration, disturbance, or replacement of the durable cover on land that is one acre in size or greater. Construction of new road sections (street, curb, gutter, sidewalk, landscape median) is pre-approved for all areas, including areas one acre in size or greater, as long as the road section construction meets appropriate City building codes and standards.</li> <li>Extraction of groundwater and installation of new groundwater wells (including monitoring well replacement).</li> <li>Removal of or damage to security features (for example, locks on monitoring wells, survey monuments, fencing, signs, or monitoring equipment and associated pipelines and appurtenances).</li> </ul>	Response included above.

Comment Number	Section/Page	Comment	Response to Comment
17. (Continued above)	Section 3.4, page 10, CERCLA Institutional Controls, bullets	Insert the fourth bullet about construction of enclosed structures and change the second to last sentence to read:  "Enclosed structures within the ARIC for VOC vapors at Parcels UC-1 and UC-2 shall not be occupied constructed until the Owner has requested and obtained FFA signatory approval in advance of construction and then documented the construction (through approval of a RACR or similar document) that any necessary engineering controls or design alternatives have been properly constructed and are operating successfully."  Activities allowed in compliance with a Risk Management Plan is not approved to allow the following restricted activities then these activities will require prior written approval by the FFA signatories.	Response included above.

Comment Number	Section/Page	Comment	Response to Comment
17. (Continued above)	Section 3.4, page 10, CERCLA Institutional Controls, bullets	If a Risk Management Plan specific to Parcels UC-1 and UC-2 contains these provisions and is approved by FFA signatories then these activities will be allowed in accordance with the requirements and protocols in the Risk Management Plan:  • Excavation of soil that penetrates the cover remedy. Following completion of excavation activities, the excavated soil must either be hauled offsite or placed back in the excavation and the cover remedy re-installed. Excavated soil may be used at other sites so long as it is placed beneath an approved cover	Response included above.
		remedy (e.g., 2 feet of clean fill, asphalt cover, side walk, or street).	

Comment Number	Section/Page	Comment	Response to Comment
17. (Continued above)	Section 3.4, page 10, CERCLA Institutional Controls, bullets (Continued above)	Construction of roads, utilities, facilities, structures (other than enclosed structures in ARICs for volatile chemicals), and related appurtenances as necessary to complete the redevelopment. Following the completion of any of these activities that penetrate the cover remedy, all excavated soil must either be hauled offsite or put back in place and an approved cover remedy must be re-installed.	Response included above.
		Demolition or removal of "hardscape" (e.g., concrete or asphalt roadways, parking lots, building foundations, and sidewalks). Following completion of hardscape removal, an approved cover remedy must be reinstalled.	

Comment Number	Section/Page	Comment	Response to Comment
17. (Continued above)	Section 3.4, page 10, CERCLA Institutional Controls, bullets	<ul> <li>Any activity that involves movement of soil to the surface from below the surface of the land. Following completion of soil moving activities all soil that has been moved from below the cover remedy must either be hauled offsite or put back in place and must be covered with an approved cover remedy (e.g., 2 feet of clean fill, asphalt cover, side walk, or street); and</li> <li>Grading or other movement of soil. Following completion of grading activities</li> </ul>	Response included above.
		existing or native soils must be covered with an approved cover remedy (e.g., 2 feet of clean fill, asphalt cover, side walk, or street)	
18.	Section 3.4, page 11, bullet that starts with "Access"	Suggest making this a separate one sentence paragraph after all the changes to the bullets above.	This bullet has been deleted from the FOST text.

Comment Number	Section/Page	Comment	Response to Comment
19.	Section 3.4, page 12, first full paragraph	At this point in time, the SFRA does not intend to accept title to UC-1 and UC-2 until and unless the "mechanism that will provide for execution of the following IC implementation responsibilities by a single entity on behalf of multiple owners of the property as described in the LUC RD is negotiated with and approved by the Navy and DTSC. It would be preferable to define this mechanism and reference it in the FOST.	No property will be conveyed by the signing of the FOST document. The Navy would prefer to address the mechanism at the transfer phase. This issue, however, has no bearing on FOST finding and, therefore, this mechanism will not be referenced as requested.

Comment Number	Section/Page	Comment	Response to Comment
20.	Section 3.4, Item 3, second and third sentences, Page 13	Other than the first sentence, this section contains generic sentences that might apply to all aspects of the ICs not just monitoring well protection. If so, then they need to be moved to a separate section. Regardless if they are meant to be in their own section, they don't make sense and aren't specific enough. For example, in the second part of the second sentence, what civil plans are you referring to? If you are referring to approval of designs for hardscape that might be built in the area then, following the model we have developed in the Parcel B and G Risk Management Plan, the FFA signatories wouldn't need to approve the designs as long as the durable covers met DBI or DPW standards and didn't alter or disturb the monitoring wells. What IC effectiveness are you referring to? If you are referring to implementing activity restrictions then you need to state that and refer to a Risk Management Plan that will need to be written and implemented. The third sentence also is very confusing. It is not clear what projects the Navy and FFA signatories would deny approval. You also need to be specific about what aspect of the ICs you are referring to. As written, these sentences are very problematic.	Please refer to City and Lennar's comment #17 above.

Comment Number	Section/Page	Comment	Response to Comment
21.	Figure 3, Proposed Reuse for Parcels UC-1 and UC-2	Why is redevelopment Block 10 highlighted using a specific pattern? Please state the reuse for Redevelopment Block 10 or remove this designation and call out.	This figure is no longer included in the FOST.
22.	Figures 4 and 5, Parcel UC-1 and Parcel UC- 2 Site Features	Please show topographic contours to denote hillsides described in the text for those not familiar with these properties.	The topography of Parcels UC-1 and UC-2 does not affect the content of the FOST and, consequently, this change has not been made.
23.	Appendix A, Table A-1a, Summary of Petroleum Products Detected	Haven't actions been taken to address these releases? If so, they should be added to this table.	Petroleum products were not chemicals of concern at Parcels UC-1 and UC-2. Groundwater samples collected at Parcel UC-2 indicated either no detections or minor detections at concentrations much lower than the risk-based action level. Consequently, the table "Summary of Petroleum Products Detected" has been deleted from Appendix A.  Section 3.2 has been expanded to include a more detailed discussion of the limited detections of petroleum products found in groundwater samples collected at Parcel UC-2.
24.	Section 1.0, end of first sentence	Fix (HNPS) acronym to (HPNS).	This correction has been made as requested.

Comment Number	Section/Page	Comment	Response to Comment
25.	Section 3.1.2.1 ninth paragraph, fourth line	(IC) should be (ICs). Section 3.4, Page 13, Item 3: "ARICs" should be "ARIC".	The FOST has been edited to remove typographical errors.
26.	Table A-1b, Page A-2	Check chemical names listed in "Regulatory Synonym" column as some are not fully visible.	This table has been adjusted to ensure all chemical names are fully displayed.

#### **REFERENCES**

- Engineering/Remediation Resources Group, Inc. 2013. Final Remedial Action Completion Report for Parcels UC-1 and UC-2, Hunters Point Naval Shipyard, San Francisco, California. February 25.
- Naval Sea Systems Command (NAVSEA). 2004. Final Historical Radiological Assessment, History of the Use of General Radioactive Materials, 1939 2003, Hunters Point Shipyard. October.
- Sealaska Environmental Services, LLC (Sealaska). 2010. Evaluation of Natural Gas Occurrence at Parcel UC-2, Hunters Point Shipyard, San Francisco, California. October 5.
- Sealaska. 2013. Final Technical Memorandum, Soil Vapor Investigation in Support of Vapor Intrusion Assessment, Parcels B, D-1, G, and UC-2, Hunters Point Naval Shipyard, San Francisco, California. March.

Tetra Tech EM Inc. 1998. Final Basewide Environmental Baseline Survey, Revision 01, Hunters Point Shipyard, San Francisco, California. September 4.